University of Alberta

Complementary and Alternative Medicine in Occupational Therapy: A Survey of Its Use by Alberta Occupational Therapists

by

Heidi Marguerite Knupp

A thesis submitted to the Faculty of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of

Master of Science

Department of Occupational Therapy

Edmonton, Alberta
Fall 2007

Library and Archives Canada

Published Heritage Branch

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque et Archives Canada

Direction du Patrimoine de l'édition

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence
ISBN: 978-0-494-33284-9
Our file Notre référence
ISBN: 978-0-494-33284-9

NOTICE:
The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:
L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

Canada

Dedication

At times, our dreams and the personal goals may go against the norm and we may be faced with unexpected challenge, causing self doubt. However, we must maintain our unique individuality and continue to strive for what we believe in. We must

"just keep swimming"

I therefore, dedicate this thesis to all those who have followed their dreams and strove to reach their goals in the face of adversity.

In the middle of difficulty lies opportunity
- Albert Einstein

Twenty years from now you will be more disappointed by the things you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbour. Catch the trade winds in your sails. Explore. Dream. Discover.
- Mark Twain

Abstract

This study examined Alberta Occupational Therapists' use of, and perceptions on the inclusion of eight forms of Complementary and Alternative Medicine (CAM): Acupuncture & Acupressure, Therapeutic Touch & Reiki, Reflexology & Massage, T'ai Chi, and Magnetic Therapy. The questionnaire developed was either e-mailed or mailed to all active Occupational Therapists registered with and on the contact list of the Alberta Association of Registered Occupational Therapists (AAROT)/Alberta College of Occupational Therapists (ACOT). Total response rate was 17.14%.

A total of 62 individual respondents had used CAM mostly for the treatment of symptoms. Reasons preventing CAM's use included lack of training 82.4%, interest (23%) and/or supporting evidence (22.3%). Considerations of incorporating CAM into Occupational Therapy focused on a client-centered and holistic approach to treatment (43%-63.3%), ranking above legal/employer-related aspects (43%-43.6%).

Opinions on the incorporation of CAM into Occupational Therapy were generally positive, and elaborations of negative responses indicated that further supporting evidence on forms of CAM and related research may result in changes of opinion.

Acknowledgements

First and foremost I would like to thank my mother, guru-editor, and friend, Dr. Margit Knupp-Kuttler, for her ever-lasting support and guidance through this process. To my dad, Hermann Knupp (a.k.a "Hermie"), thank you for your unwavering support and making it possible for allowing me to follow my dreams and achieve my goals. Dr.Shaniff Esmail, a personal mentor and friend. Thank you for your guidance, sound advice and personal support. You allowed me to become a better professional and academic, for which I am truly grateful.

Thank you to Lorna Harron and all those who helped with the editing process along the way. Alison Douglas, your guidance and knowledge in formatting and through the creation of multiple drafts was greatly appreciated. Thank you, Adele Colon for all your help with administrative issues. Ryan Summer and Heather Scott, thank you for the many hours you spent helping with mundane tasks to meet mailing deadlines.

Josh Wasylciw, thank you for helping me keep my feet on the ground through many philosophical discussions, and with your friendship and support.

I am truly grateful for the list of potential participants AAROT/ACOT provided, and in sending out the e-mails. Thank you SAOT, for your help with the e-mail questionnaire and recruitment of on-line respondents with the provision of a link in your newsletter.

To the computer-gods, Lester Limm and David Polvere -- who recovered my entire Thesis when my computer crashed, and saved my hard drive more than once.

Special thanks to the department of Occupational Therapy for this opportunity.

Thank you, Dr.Olive Triska for being my committee member and for your input throughout the process. Thank you, Dr.Sharon Warren for acting as my co-supervisor, and for your input. Last not least, I would like to express my heartfelt thanks to my supervisor, Dr. John Misiaszek – for your guidance, patience and personal support.

Table of Contents

Chapter 1: Introduction and Review of Literature 1

Introduction 1

Literature Review 2

Interrelation of Occupational Therapy and CAM 2

Rationale for Inclusion of Selected CAM Methods in Study 4

General Definition of CAM & Description of CAM Methods Included in Study 5

Definitions and Applications of CAM Methods 6

Acupuncture & Acupressure 7

Magnetic Therapy 7

Massage & Reflexology 8

Therapeutic Touch (TT) 9

Reiki: 10

T'ai Chi 10

Previous Research Conducted in/on the Use of CAM 12

Within the Medical Field 12

Within Occupational Therapy 13

Relating the Chosen Forms of CAM to Occupational Therapy 14

Potential Reasons Currently Preventing Occupational Therapists from Incorporating CAM Methods 17

Non-Scientific Barriers & General Limitations 19

Summary of Literature Review 23

Problem Statement 24

Objectives of Study 25

Chapter 2.1: Methods 26

Sample 26

Sample Size 26

Sample Criteria 26

Inclusion & Exclusion Criteria 26

Study Design 27

Description of Questionnaire 27

Justification of Study Design 27

Procedures 29

Development of the Questionnaire 29

Questionnaire Directions Provided 29

Questionnaire Adjustment following Completion of Pre-Questionnaire Discussions 30

Reliability & Rigor 31

Validity 32

Control for Bias 32

Sampling 33

Data Gathering 33

Sample Size Calculation 33

Skip Logic Incorporated into Questionnaire 33

Definition of Valid Responses 34

Determination of Responses provided 35

Availability of Documents 35

Schedule of Initial and Follow-Up Requests 36

Data Inclusion and Data Entry 36

Categorization of Open-Ended/Opinion-Based Responses 37

Coded Questionnaire 37

Chapter 2.2: Methods – Data Entry 39

Data Analysis 39

Description of Data 39

Data Adjustment 40

Expected Response Rate of the Questionnaire 40

Ethical Considerations 42

Chapter 3: Results 43

Response Rate and Description of Respondents 43

Actual Response Rate 43

Comparison of E-mail vs. Mail-out Respondents 45

Differences between E-mail and Mail-out Groups 46

Calculation of Percentages 48

Respondents' Answers to CAM Questions 48

Acupuncture & Acupressure 49

Magnetic Therapy 53

Massage/Reflexology 57

Therapeutic Touch (TT)/Reiki 62

T'ai Chi 68

Adjustment of Data 71

Chapter 3.2 – Summary of Results 74

Representation of Data in Comparison to AAROT/ACOT and Alberta Practitioners 76

DISCUSSION 79

Comparing Respondents' Purposes for CAM Use to Treatment Benefits Reported within Literature 81

Massage and Reflexology 81

T'ai Chi 82

Acupuncture/Acupressure 83

Magnetic Therapy 84

Therapeutic Touch (TT)/Reiki 85

Factors Contributing to CAM Referral & Circumstances Preventing Referral 87

Factors Restricting CAM Use 91

The Role of Administrative and Legal Restrictions Relating to the Non-Use of CAM 94

Circumstances Influencing the Incorporation of CAM 96

Potential for Inclusion of CAM into the Scope of Practice of Occupational Therapy 97

Confusion regarding Regulations and Restrictions by Governing Bodies 99

Limitations of Study 102

Conclusion 105

References 107

APPENDICES 114

Appendix I: Estimated Rate of Return & Sample Size Calculation 115

Appendix II: Questionnaire 117

Appendix II.1: Demographics 118

Appendix II.2: Questionnaire 119

Appendix III.1: Instructions for Completion of Questionnaire 129

Appendix III.2: Instructions for Completion of Questionnaire: E-mail Version 130

Appendix IV: Introduction Letter: Mail-out Version 131

Appendix V: Schedule of Initial and Follow-Up E-mails 134

Appendix V.1: E-mail Letter; Request for Participation 135

Appendix V.2: E-mail Request for Participation – Reminder E-mail 136

Appendix V.3: E-mail Request for Participation – Final Reminder 137

Appendix VI: Copy of Questionnaire Web-Site 138

Appendix VII: Flow of Questions/Skip Logic 142

Appendix VIII: Table 35 - Question 8 143

Appendix IX 144

Table 36: Question 4 -- *I have not personally used {the indicated form of CAM} in my practice as an Occupational Therapist because* 144

Appendix IX.2 - Elaborations on Restrictions of Use 145

Table 37: Specifications Provided "*Administrative/Logistical & Other*" 145

Appendix X 146

Table 38: Circumstances under which those who have not used Complementary and Alternative Medicine would consider doing so 146

Appendix XI: Incidence of CAM Referral Among Respondents 147

Table 39.1: Referral Rate of all respondents 147

Table 39.2: Referral Rate among users of CAM 147

Table 39.3: Referral Rate among Non-Users of CAM 148

Table 39.4: Final Categorization..... 148

Appendix XII: Coding of Open-Ended/Opinion-Based Responses 149

List of Tables

Table 1 - Characteristics of respondents.....p.43

Table 1 cont'd: Characteristics of respondents.....p.44

Table 1 cont'd: Characteristics of respondents.....p.45

Table 2: Gender distribution.....p.45

Table 3 - Age group distribution.....p.46

Table 4 – Years practicing.....p.46

Table 5: Symptoms treated by therapists using Acupuncture/Acupressure.....p.49

Table 6: Medical conditions treated by therapists having used Acupuncture/Acupressure.....p.49

Table 7: Reasons preventing therapists from personally using Acupuncture/Acupressure.....p.50

Table 8: Circumstances under which therapists who had not used Acupuncture/Acupressure would consider using it.....p.51

Table 9: Circumstances under which those who have not referred Acupuncture/Acupressure would consider doing so.....p.52

Table 10: Specifications/elaborations of responses provided by responding Occupational Therapists regarding incorporation of Acupuncture/Acupressure into the scope of practice of Occupational Therapy.....p.53

Table 11: Reasons preventing therapists from using Magnetic Therapy.....p.54

Table 12: Circumstances under which therapists who had not used Magnetic Therapy would consider using it.....p.55

Table 13: Circumstances under which those who have not referred Magnetic Therapy would do so.....p.56

Table 14: Specifications/elaborations of responses regarding the incorporation of Magnetic Therapy into the scope of practice of Occupational Therapy.....p.57

Table 15: Symptoms treated by therapists using Massage/Reflexology.....p.58

Table 16: Medical Conditions treated by therapists using Massage/Reflexology.....p.58

Table 17: Reasons preventing therapists from using Massage/Reflexology.....p.59

Table 18: Circumstances under which therapists who had not used Massage/Reflexology would consider doing so.....p.59

Table 19: Circumstances under which those who have not referred Massage/Reflexology would consider doing so.....p.61

Table 20: Specifications/elaborations regarding the incorporation of Massage/Reflexology into the scope of practice of Occupational Therapy.....p.62

Table 21: Symptoms treated by therapists using Therapeutic Touch/Reiki.....p.63

Table 22: Medical conditions treated by therapists using Therapeutic Touch/Reiki.....p.63

Table 23: Reasons preventing therapists from using Therapeutic Touch and/or Reiki.....64

Table 24: Circumstances under which therapists who had not used Therapeutic Touch and/or Reiki would consider using it.....p.65

Table 25: Circumstances under which those who have not referred Therapeutic Touch and/or Reiki would consider doing so.....p.66

Table 26: Specifications of responses regarding the incorporation of Therapeutic Touch and/or Reiki into the scope of practice of Occupational Therapy.....p.67

Table 27: Symptoms treated by therapists using T'ai Chi.....p.68

Table 28: Medical Conditions treated by therapists using T'ai Chi.....p.68

Table 29: Reasons preventing therapists from using T'ai Chi.....p.69

Table 30: Circumstances under which therapists who had not used T'ai Chi would consider using it.....p.70

Table 31: Circumstances under which those who have not referred T'ai Chi would consider doing so.....p.71

Table 31.2: Extrapolation of response percentage for T'ai Chi question 8: response option "based on personal professional judgement".....p.72

Table 32: Specifications/elaborations regarding the incorporation of T'ai Chi into the scope of practice of Occupational Therapy.....p.73

Table 33: Characteristics of members as provided by AAROT/ACOT.....p.77-78

Table 34: Chi-Square Analysis for Respondents and AAROT/ACOT.....p.78

Table 35 - Question 8 -- Circumstances under which those who have not referred {the indicated form of CAM} would do so.....p.143

Table 36: Question 4 -- I have not personally used {the indicated form of CAM} in my practice as an Occupational Therapist because.....p.144

Table 37: Specifications Provided "Administrative/Logistical & Other".....p.145

Table 38: Circumstances under which those who have not used Complementary and Alternative Medicine would consider doing so.....p.146

Table 39.1: Referral Rate of all respondents.....p.147

Table 39.2: Referral Rate among users of CAM.....p.147

Table 39.3: Referral Rate among Non-Users of CAM.....p.148

Table 39.4: Final Categorization of Respondents.....p.148

List of Abbreviations

AAOT	American Association of Occupational Therapists
ACOT	Alberta College of Occupational Therapists
AAROT	Alberta Association of Registered Occupational Therapists* *Note: as of Feb.2007, AAROT was proclaimed the Alberta College of Occupational Therapists*
ACOT	Alberta College of Occupational Therapists
Ax	Assessment
CAM	Complementary and Alternative Medicine
CM	Complementary Medicine
CP	Cerebral Palsy
CVA	Cerebral Vascular Accident
Dx	Diagnosis
GBS	Guillain-Barre Syndrome
MS	Multiple Sclerosis
OT	Occupational Therapy/Occupational Therapist
ROM	Range of Motion
SAOT	Society of Alberta Occupational Therapists
SCI	Spinal Cord Injury
TT	Therapeutic Touch
WHO	World Health Organization

Chapter 1: Introduction and Review of Literature

Introduction

Today's health care system is changing. With the increased awareness by caregivers and receivers of the different options and approaches to treating illnesses, health care practitioners are facing a new challenge of balancing supply and demand of treatment methods. What has traditionally been considered "alternative" is becoming more common-place in mainstream medicine and rehabilitation, as professionals and patients are choosing different forms of treatment.

In striving to improve overall health and well-being, and treating their illnesses – both physical and mental - patients are looking for alternate treatment methods that go beyond the practice of using pharmaceuticals or surgery, as is commonly used in mainstream medicine. More natural, holistic approaches to health care are being chosen to a greater extent. For years, people have made use of "Alternative Medicine", choosing traditional methods such as acupuncture and massage. These alternative therapies are perceived to provide the individual with more autonomy and control over their health and treatment (Astin, 1998). Previous questionnaires on the use of Complementary and Alternative Medicine (CAM), conducted internationally and within Canada, indicate that interest for alternative forms of treatment is steadfastly increasing, both on the part of the general public and health care professionals. As early as 1994, 15% (Millar, 1997) of Canadians reportedly used a form of CAM, and in 2002, this rate had increased to 70% (Bodeker & Kronenberg, 2002).

In spite of this documented increased use of CAM, one can not assume that acceptance is universal. In fact, opinions by health care professionals and the general

public fluctuate significantly, covering a broad spectrum. Reasons for each opinion may vary from personal experience to those based on scientific data and research, where support both for and against the use of CAM can be argued.

Even though several research studies on individual forms of CAM, such as acupuncture, have been conducted, the term "Alternative Medicine" has yet to be clearly defined. Neither health care professionals nor the general public are sure what forms of treatment are considered "Alternative". Generally speaking, definitions found in literature describe "Alternative Medicine" as treatment styles that are not widely taught in medical schools, and focus more on the spiritual and holistic healing of an individual than on simply curing disease or illness (Raso, 1994; Ruggie, 2004). According to the National Centre for Complementary and Alternative Medicine (NCCAM), CAM is a diverse group of medical and health care systems, practices and products that are not currently considered part of conventional medicine (Aug/10/05, www.nccam.nih.gov).

Literature Review

Interrelation of Occupational Therapy and CAM

The practice of Occupational Therapy is based on a client-centered approach and holistic view, treating each person in an autonomous and personal manner. As outlined in "Enabling Occupation: an Occupational Therapy Perspective" (Stanton, 1997), Occupational Therapists are among health care professionals who recognize a person as a whole entity that "functions within physical, emotional, intellectual and spiritual domains that interact within the context of the client's environment" (Bouwman & Notkin, www.caot.ca, Mar/17/05; World Health Organization). The foundation of Occupational

Therapy practice and principles, through its paradigms, frames of references and theories, is to be client-centered by using holistic treatments and approaches. CAM shares these same ideals (National Centre for Complementary and Alternative Medicine, 2005; Astin, 1998; Raso, 1994; Ruggie, 2004). However, the potential exists in the practice of Occupational Therapy to go beyond CAM or conventional health practices in their approaches to treatment, by combining CAM use with the current conventional methods and ideologies, thereby optimizing function of the individual. Although mainstream medicine is striving for interdisciplinary collaboration and client involvement in treatment decisions, CAM and Occupational Therapy go further by exploring the complexity of each individual situation, and by aiding in lifestyle and environmental modifications.

According to CAM's basic definition, practitioners approach treatment with the goal of being client-centered, incorporating all aspects of the person – their *physical*, *spiritual*, *affective*, and *environmental components*, what is known in the field of Rehabilitation Medicine as a *"holistic"* approach. The underlying definitions of Occupational Therapy and CAM are built upon the same paradigms. Both focus on actively engaging the client/patient in their treatment, and they use the body and environment to their fullest potential in order to increase general health and quality of life. Both forms of practice share a common definition of health and wellness which goes beyond medical diagnosis. Andrea Brachtesende (2005), confirms this by stating "both CAM and Occupational Therapy are concerned with the whole person, with bringing back into harmony the mind, body, and spirit so that you can live effectively with whatever condition you're facing" (p.10).

The use of CAM is also recognized by the World Health Organization (WHO), describing CAM as "…care wherein people are viewed in totality within a wide ecological spectrum and which emphasizes the view that ill health or disease is brought about by an imbalance, or disequilibrium, of a person in his or her total ecological system…" (Davis, 2004, p.17). One of the main models used in Occupational Therapy to aid practitioners in ensuring a holistic treatment is the Canadian Model of Occupational Performance (CMOP), which incorporates the same four components of the individual - spirituality, affective, cognitive and physical - that CAM uses as its main paradigm. This is also apparent in the definition of holism and alternative medicine provided by WHO, which states "Holistic health incorporates not simply the body, but also the four quadrants of need and function…physical, intellectual, emotional and spiritual" (Davis, 2004, p.18). Therefore, CAM appears to be aligned with the fundamental principle of Occupational Therapy, and it is appropriate to consider CAM as a valid treatment option.

Rationale for Inclusion of Selected CAM Methods in Study

The list of CAM therapies is extensive and no absolute figure can be provided due to the generality of the definition of CAM, as stated above. For the purpose of this study, only eight forms of CAM were selected. The selection process consisted of primary and secondary research, which was conducted by way of personal communication with health care professionals and extensive literature review, focusing on the use of CAM in the field of Rehabilitation Medicine.

The decision as to which methods to include was based on frequency of citations and greatest potential for implementation in Occupational Therapy practice which, in

turn, was based on the description and definition of the methods, their treatment goals, and how they were performed. This resulted in the inclusion of Acupuncture & Acupressure, Magnetic Therapy, Massage & Reflexology, Therapeutic Touch (TT) & Reiki, and T'ai Chi.

General Definition of CAM & Description of CAM Methods Included in Study

While trying to determine a universal definition for CAM, a core description and characteristic within each form of CAM re-appeared, namely the presence of energy fields, or meridians/charkas (also referred to as Qi), within the body and the universe. These reportedly interact with each other to obtain a balance. It is traditionally thought that an imbalance in these energy fields within the body results in illness. Qi is proposed to regulate a person's spiritual, emotional, mental and physical balance (www.nccam.nig.gov, Feb/18/05). Qi can be used to "prevent, diagnose, and treat disease: improving health and physical fitness" (Raso, 1994, p.28).

Qi:

It is important to have an understanding of Qi prior to being able to understand methods used in most forms of CAM, including acupuncture & acupressure, reiki & therapeutic touch, reflexology & massage, T'ai Chi, as well as magnetic therapy, as the energy channels addressed in Qi and several forms of CAM are the same.

Qi channels, or meridians, are pathways that create relationships between vital energy and nature and frequently follow major nerves and arteries. The channels are major connectors of each internal organ to the rest of the body. Davis reports that energy

channels throughout the body regulate chi (Qi) flow and that the body consists of eight channels and 12 meridians (Qi rivers) (2004). An analogy to the flow of blood was made to describe the meridians addressed in this form of treatment (Davis, 2004).

The goal of CAM therapies, incorporating this flow of energy into their definition and treatments, is to restore the energy flow to its proper level by stimulating points along the meridians – such as in acupuncture (Rabinstein et al., 2004), massage & reflexology (Field, T. in Jonas & Levin, 1999, p.385; Siev-Ner, 2003; the National Center for Complementary and Alternative Medicine, www.nccam.nih.gov, Feb/18/05), or the energy fields themselves – such as in magnetic therapy (Lawrence, Rosch & Plowden, 1998; Aloisio, 2004.), therapeutic touch & reiki (Fairbrass, in Novey, 2000) and T'ai Chi (Davis, 2004), depending on the symptoms suffered and physical location of the illness.

Qi is further described by Rabinstein and Shulman (2003), who refers to Qi as 'Life Energy', stating: "…Qi is believed to flow in the body through channels or meridians connected to all organs and to each other. Disease is explained by an imbalance in the energy flow within these meridians" (p.138).

Definitions and Applications of CAM Methods

Several reports on the effectiveness of the forms of CAM included in this study have been published, suggesting that these forms may have benefits. Consequently, they have potential to be incorporated into Rehabilitation Medicine and to be utilized by Occupational Therapists. A critical evaluation of the research evidence showing the benefits of each form of CAM addressed is not presented here, as this is not the purpose

of this thesis. Rather, the references included document the growing literature base that may encourage Occupational Therapists to incorporate CAM into their own practice.

Acupuncture & Acupressure

Acupuncture (use of needles) and acupressure (use of pressure using hands) points are based on the ancient Qi channels or meridians as described above. The goal of acupuncture is to restore the energy flow to its proper level by stimulating points along the meridians depending on the symptoms suffered and physical location of the illness/ailment (Novey, 2000; Davis, 2004).

The World Health Organization has identified over 40 medical conditions shown to be positively affected by acupuncture treatment, as reported by Dean, Mullins and Yuen (in Novey, 2000), such as fibromyalgia, reflex sympathetic dystrophy, memory problems and sensory disturbances, as well as asthma, nausea and insomnia (p.192-196). Dean et al. (2000) also noted that acupuncture was used to treat both acute and chronic pain resulting from several general conditions such as spinal cord injury (SCI) and cerebrovascular injuries as well as secondary effects from malignancies (p.196). Other conditions treated included: musculoskeletal pain, carpal tunnel syndrome, myofascial pain, several forms of arthritis (such as osteo- and rheumatoid), and repetitive strain injuries (Helms in Jonas & Levin, 1999).

Magnetic Therapy

The theory behind magnetic therapy is that magnets emit a magnetic field called a "magnetic flux". This "magnetic flux" taps into and interacts with the body's natural

magnetic field, thereby affecting both the nervous and physiological systems. Magnetic therapy is described as "tapping into" the body's meridians, or energy flow. Magnets are strategically placed to activate the meridians and affect several body systems depending on their placement (Davis, 2004; Pawluk, 2000).

Pawluk (2000) claims several benefits, including vasodilation, analgesic action, anti-inflammatory effects, spasmolytic activity, healing acceleration (including fractures) and anti-edema activity (p.166). Also reported were clinical applications to treat several ailments, illnesses or disorders such as musculoskeletal problems, fibromyalgia, spasm, fatigue or low energy, insomnia, as well as stress, Alzheimer's disease and Carpal Tunnel Syndrome (CTS) (p.169-170). Furthermore, depression (Lawrence, et al., 1998), reduction in pain, either in a general sense or due to specific medical conditions, such as Diabetic Peripheral Neuropathy (Weintraub, 2003), or Arthritis (Pawluk, 2000; Harlow, Greaves, White, Brown, Hart & Ernst, 2004) and related problems, were also often reported.

Massage & Reflexology

Massage originates from the Greek word meaning "to knead", and has been defined by Field, in Jonas and Leving (1999) as "the hand manipulation of body tissues to promote wellness and to reduce stress and pain." (p.383).

Reflexology: "a therapeutic method that uses manual pressure applied to specific areas, or zones, of the foot that correspond to areas of the body, in order to relieve stress and prevent and treat physical disorder"(Jonas & Leving, 1999, p.583).

Relevant literature shows that massage is an effective treatment form for a variety of conditions and symptoms, as it will affect all systems of the body and positively affect general health (Greene, 2000; Jonas & Leving, 1999).

Greene (2000) noted that performing massage will increase blood circulation, decrease tension in muscles or their flaccidity, and stimulate or sedate the nervous system, as well as enhancing tissue healing (p.339).

Specific medical conditions reported as benefiting from this method of CAM therapy included diabetes, fibromyalgia, sleep disorders (such as chronic fatigue syndrome and insomnia), stress/anxiety disorders, muscle spasm, depression, autism, arthritis and soft tissue dysfunctions (Field, in Jonas & Leving, 1999; Greene, 2000; Sieve-Nier, 2003). An increase in immune function was also noted by Field (in Jonas & Leving, 2000, p.385). Sieve-Nier et al. (2003) noted the positive effects of Reflexology on patients with Multiple Sclerosis (MS), decreasing pain levels, spasticity as well as paresthesia.

Therapeutic Touch (TT)

A form of spiritual healing which involves a laying of the hands by the therapist a few inches away from the patient's body. The therapist "centers" themselves to the patient, and focuses on the patient's energy field. The therapist uses their hands to sense an imbalance in energy and then visualizes the energy becoming balanced and free flowing (Benor, 1999; Anderson, 2004).

To support the use of TT in the medical field, Benor (1999; as discussed in Jonas & Levin, 1999) and Anderson (2004; as discussed in Davis, 2004) reported several clinical trials and studies showing improvement in conditions. Patient populations

included those suffering from headaches, arthritis, anxiety disorders, and mood disorders. Physiological benefits, such as an acceleration in wound healing, a decrease/slowing in tumour growth and slowing of illness progression were also noted (Benor, 1999).

Reiki:

Similar to therapeutic touch, yet the hands are placed directly on the client to promote healing on all levels: physical, mental, emotional and spiritual (Fairbrass, 2000). Defined by Fairbrass (in Novey, 2000), as "Rei = universal & Ki = vital force or energy flowing through all that is alive" (p.436).

Reiki has been used to treat numerous conditions seen every day in rehabilitation medicine, including addictions, Parkinson's disease, psychiatric disorders, all forms of arthritis, stress, osteoporosis, and sleep disorders (Fairbrass, 2000). Pain management was often discussed (Fairbrass, 2000; Mailoo, 2002; Olson, Hanson & Michaud, 2003). Wardell and Engebretson (2001), who conducted a study of its use by nurses, found that reiki significantly reduced anxiety. Positive effects on quality of life were reported by cancer patients (Olson, et al., 2003). Mailoo (2002) reported its use in the United States by Occupational Therapists for treating tactile defensiveness and behavioural problems, yet literature fails to show Canadian Occupational Therapists using this as a form of treatment.

T'ai Chi

Summarizing Jennifer Bottomley's in-depth description of T'ai Chi, T'ai Chi is a specific form of exercise composed of slow, exact and controlled movements performed in

a precise order and composed of over 108 postures and transitions. Its main focus is the incorporation of the body as a whole, recognizing the importance of the spirit in health, the mind-body connections, and the production of energy to achieve overall health. Both the musculoskeletal and nervous systems are activated and exercised (Davis, 2004).

Patient populations shown to benefit from T'ai Chi include: the elderly (Davis, 2004), those with cardiovascular, orthopaedic or neurological diseases (Ching, Jin-Shin Lai & Ssu-Yuan, 2002; Davis, 2004), people suffering from specific illnesses such as Multiple Sclerosis (MS), osteoporosis, cancer, anxiety & fatigue (Davis, 2004) and osteoarthritis (Hartman, et al., 2000). Physical systems positively affected included general physical functioning, cardio-respiratory function, and microcirculation diseases (Ching et al., 2002). Effect on balance, kinaesthetic sense and strength, was reported by Jacobson, et al. (1997). Davis (2004) and Bottomley (2004) also reported on T'ai Chi's effect on coordination, endurance, flexibility and relaxation. Stress reduction was reported as a beneficial factor by Ching et al. (2002) and by Jin (1996). Furthermore, reduction of mood disturbances (Brown et al., 1995), enhancement of personal efficacy (Li et al., 2001), improvement in functional daily activity (Ching et al., 2002), reduction of nervousness and tension, improvements in self-care activities and social support were noted as further benefits of T'ai Chi (Hartman et al., 2000).

Previous Research Conducted in/on the Use of CAM

To gather information on past research conducted on the use of CAM in the medical and rehabilitation fields, a critical review of the literature was performed in CINAHL, MEDLINE & PubMed from 1966-present. Publications discussing the forms of CAM used were isolated and information on the percentage of use and purposes for use of CAM forms were analyzed. Following is a summary of data in the medical field, as well as within Occupational Therapy, based on the information found.

Within the Medical Field

In the U.S.A., a fairly high percentage of physicians have been adding forms of CAM to their treatment regimen. Rates for Canada were not available. The rates of physicians in the U.S.A. providing referrals for CAM ranged from 35% for massage, to 51% for acupuncture and 57% for chiropractics. In Canada, referral rates made by physicians to a CAM professional ranged from 58-85% for chiropractics and 42-68% for acupuncture (Astin, 1998). Even if physicians were not using or prescribing CAM therapies themselves, several were still noted to support its use and report it as an effective form of treatment, with rates ranging from 71% for acupuncture (with a mean of 43%) to as high as 83% for chiropractics (mean 40%) (Astin, p.2306, 1998). The percentage of Canadian doctors supporting CAM ranged from 59-70% for chiropractics to 71-78% for acupuncture (Astin, 1998, p.2308).

Within Occupational Therapy

To date, the use of CAM by Occupational Therapists has been minimally researched, and no questionnaire conducted in Canada apparently exists. Overall, only one questionnaire on Occupational Therapists' beliefs regarding the treatment of chronic pain was found to include CAM (Brown, 2002). Brown (2002) reported on a questionnaire conducted in January 2001 where members of the National Occupational Pain Association were surveyed/questioned. Brown (2002) commented on the expanding body of research within Occupational Therapy, the current focus within chronic pain research on the importance of a multi-disciplinary approach, as well as the important role Occupational Therapists bring to a multi-disciplinary structure. It clearly indicated that in general, Occupational Therapists held a positive opinion with regards to using CAM. Results of the questionnaire indicated that 50-79% of Occupational Therapists "…believed interventions such as acupuncture, yoga and meditation [were] needed for the treatment [of chronic pain]" (Brown, 2002, p.399).

In 2005, Brachtesende published a report on the use of CAM within Occupational Therapy in which she discussed the "what, why and how practitioners are using CAM" (p.10). Within her discussion, she reported findings of a 1998 survey [questionnaire] conducted by the American Association of Occupational Therapy (AAOT) in which respondents indicated having used several forms of CAM, including manual therapies such as massage and myofascial release; several forms of traditional Chinese movement of energy therapies including T'ai Chi, TT, and reiki among others, as well as traditional medicines such as Tibetan or Native American medicine (p.10). However, no rates on the percentage of use by Occupational Therapists was reported.

Relating the Chosen Forms of CAM to Occupational Therapy

Although no direct statements on the use of CAM within the practice of Occupational Therapy, and specifically in Alberta, were found, assumptions can be made and parallels to other professions using CAM can be drawn, based on previously reported research which was reviewed for this thesis.

In 2002, Mailoo provided a brief introduction to reiki, discussing the flow of Chi, its flow through organisms in a system of pathways [meridians] and the belief that a disruption in a person's energy flow renders one vulnerable to illness (p.190). Mailoo (2002) also provided a brief review of what he believed were some of "the strongest Reiki-specific English-language research publications to date" (p.191). Within this summary Mailoo (2002) reported the use of reiki in the United States by Occupational Therapists for the treatment of pain, tactile defensiveness, and behavioural problems (p.190), yet literature failed to show *Canadian* Occupational Therapists using this as a form of treatment.

Other forms of CAM were also noted to have a direct relationship to the principles of Occupational Therapy. Acupuncture's main goal is to relieve pain resulting from a variety of medical conditions. Occupational Therapists help patients deal with chronic pain management. Dean, Mullins, and Yuen, as published in Novey (2000), provided detailed research on acupuncture, including its origin and history, biologic mechanisms of action as well as reasons for referral (p.191-202). Literature review and personal discussions conducted for this thesis indicated that although a large number of practitioners in the field of rehabilitation appear to be familiar with acupuncture, few

Occupational Therapists use it, and no literature was found that describes/demonstrates its use in any rehabilitation field beyond Physical Therapy.

In all studies noting the use of massage therapy analyzed for this paper, the importance of client-centeredness and individuality of care was stressed, as was making the treatment and therapy personal and individual, maximizing its therapeutic benefits - a key goal of Occupational Therapy.

T'ai Chi strives to increase whole body and mind awareness by teaching strategies for maintaining a maximum health and function, thereby enhancing quality of life (Davis, 2004). T'ai Chi incorporates physical, psychological and emotional components of the body. It is a *holistic* exercise program in its purest form. This clearly is related to the practice of Occupational Therapy and its paradigm of the holistic person and components of the CMOP.

With CAM therapies, the key goal considered is whole body healing, which incorporates the consideration of general physical health and wellness, affect and quality of life. As pointed out by Novey (2000), in order to maximize the benefits of CAM treatments, it is important to combine the various forms of CAM with other treatment methods, such as relaxation and stress management techniques, as well as using an interdisciplinary approach. This view is supported by other literature. Fairbrass (2000) and Anderson (2004) recognized the benefits of complementing TT and reiki with medication and an interdisciplinary approach, while Jonas and Levin (1999) stressed the importance of combining acupuncture treatments with other medical treatments, such as pain management and relaxation/stress management. Benor (1999) also pointed out that

this approach of combining treatment forms and techniques would lead to shortening treatment period and thereby cut cost.

It has been documented by Benor (1999; in Jonas & Levin), Jonas and Levin (1999), and Berman, Lao, Langenberg, Lin, Gilpin and Hochberg (2004) that several established professionals, such as nurses, doctors, chiropractors, and physiotherapists complement traditional medicine with a variety of CAM methods. Based on studies conducted in other professions using CAM, benefits to incorporating CAM into Occupational Therapy can thus be deducted. Benefits were researched and documented in Activities of Daily Living (ADL), mood disorders, anxiety disorders, all forms of arthritis, as well as certain forms of dementia and disturbances in cognition, as noted by Diamond et al., (2003, p.981). Benefits included increasing independence in Activities of Daily Living (ADL), and in the treatment of several illnesses including: mood disorders, anxiety disorders, all forms of arthritis, certain forms of dementia and disturbances in cognition. All health conditions listed are also treated by Occupational Therapists, suggesting that using CAM treatments may further enhance the practice or treatments provided by Occupational Therapists, and that there is a strong potential for optimizing treatment by complementing Occupational Therapy with CAM methods.

Inter-disciplinary approaches used to maximize treatment are recognized by Occupational Therapy and CAM professionals alike. This would therefore justify the use of CAM within the profession of Occupational Therapy, as combining two professions which share similar ideals will allow them to complement one another, further supporting an interdisciplinary orientation which is known as a key component in Occupational Therapy practice. Lisa Bitton, as referenced by Andrea Brachtesende (2005), supports

this view, as noted by her statement, "CAM can enhance one's [Occupational Therapist's] practice… With Occupational Therapy we are promoting positive lifestyle changes, and CAM methods help the person improve their functioning…" (p.10). Even if Occupational Therapists do not want to personally use CAM therapies, providing referrals presents a viable option, as illustrated by physicians in the United States (Astin, 1998). Terry Giese (as found in Brachtesende, 2005), author of a position paper to the American Occupational Therapy Association (AOTA), aimed to define the appropriate use of CAM within the scope of practice of Occupational Therapy and described the need to include CAM into Occupational Therapy. Giese (as summarized by Brachtesende, 2005) stated "…traditional occupational therapy wasn't doing enough to address the needs of [her client base]" (p.12).

Potential Reasons Currently Preventing Occupational Therapists from Incorporating CAM Methods

Health care professionals have the moral responsibility to stay up-to-date with current research and treatment methods in order to provide the highest standard of care available to their patients. The practice of using literature and research results to support professional treatment choices is commonly known as "Evidence-Based Practice/Medicine" (EBP/M). Several experimental methods are used to gather evidence on the effectiveness of a form of treatment. Currently, Randomized Control Trials (RCT) are considered the "gold standard" in providing evidence of a treatment's effectiveness (Mendel, 2004, p.21).

Most studies evaluating the effectiveness of CAM lack the rigor and objectivity of RCTs and other strong research designs, limiting the evidence provided by these studies. A literature review conducted in PubMed, MedLine & CINAHL which was restricted to the eight forms of CAM listed above, and on reports which analyzed the methodologies used in research studies involving CAM, revealed the presence of several scientific limitations, poor research design and execution. Some of the major concerns included the lack of control for participant and/or researcher expectations, and treatment blinding. Among studies where such concerns were reported were Taylor-Piliae and Froelicher (2004), who conducted a meta-analysis on the effectiveness of T'ai Chi exercise in improving aerobic activity, in which they commented on a variety of research flaws. Taylor-Piliae and Froelicher (2004) reported bias among limitations due to the nature of the therapy provided and its related controversies. Harlow et al. (2004) conducted a RCT on magnetic bracelets with the objective of determining a magnet's effectiveness in pain control for osteoarthritis of the hip and knee. Although Harlow et al. (2004) reported results which indicated a decrease in pain among participants beyond that of a placebo effect, they questioned the effect of placebo on results due to the difficulty in controlling for it. Other reviewers of studies in which CAM was used reported major flaws in the methodology used, such as lack of rigor and basic study design, thereby resulting in the inability to replicate findings and drastically decreasing the ability to generalize beyond the study or treatment group (Krieger, 1975; Verhagen, Immink, Van der Maulen & Bierma-Zeinstra, 2004; White, 2004).

The fact that CAM is lacking quality research may be one of the main factors preventing Occupational Therapists from including CAM methods into their treatment

regime. Moreover, Richardson (2002) noted that simply finding evidence showing the effectiveness of Complementary Medicine (CM) is difficult due to two fundamental reasons; (1) "the evidence base is limited because insufficient research studies of high quality have been carried out" and (2) "finding the available evidence is not a straightforward process" (p.221). Richardson (2002) elaborated that this difficulty was due to the fact that, although several scientific databases include references to CAM, reviewers must use a variety of strategies and key words when searching the databases. This would likely produce different results, as each database covers a variety of journals, each of which use different key words, further complicating researchers' ability to find appropriate publications (p.221). Dr. Eisenberg, who presented at the Conference on Evidence-Based Complementary Medicine and was summarized by Whitmarsh (2000), also noted the fundamental lack of research and basic evidence of CM studies (p.365).This lack of empirical research evidence may be one of the most important reasons why Occupational Therapists may not incorporate CAM in their practice.

Non-Scientific Barriers & General Limitations

Any professional would be hesitant to use a form of treatment that they are not fully familiar with, as they are aware of the legal implications and ethical considerations. In a care-giving profession, this is extremely critical. Performing a therapy without proper training, education or certification, or without the guidance of a framework or model, can result in harm to the patient and may have legal consequences (Maurer & Teske, 1989; Taylor & Humphry, 1991). A breach of ethics, such as infringing upon another profession, is another major concern. This was confirmed by earlier studies

conducted on the incorporation of Physical Agent Modalities (PAM) when they were first introduced into the field of Occupational Therapy (Maurer & Teske, 1989; Taylor & Humphry, 1991; Glauner, Ekes, James & Holm, 1997). Taylor and Humphry (1991) summarized several authors, including the American Association of Occupational Therapy (AAOT), who were concerned with Occupational Therapists incorporating PAMs into their practice, due to reasons given above (training, education, ethics, etc…), as well as the belief that PAMs are considered "non-activity-directed modalities that are done to patients", as stated by Huss in 1981 (p.925). The importance of receiving proper training and establishing competence in the application of PAMs, in order to avoid potentially injuring a patient, was further discussed by Glauner et al. (1997), who included Taylor and Humphry's 1991 report as support for their study describing Occupational Therapists' perceptions regarding the training and education necessary to become competent in the application of PAMs.

There are also administrative restrictions, addressed by Kelner, Wellman, Boon and Welsh (2004), which may prevent Occupational Therapists from using CAM methods. Kelner et al. (2004) discussed the barriers created by the government/state regarding the general incorporation of five forms of CAM (including chiropractics, naturopathy, acupuncture/traditional Chinese medicine, homeopathy and reiki), due to "the fundamental tension between the various levels of government" (p.79). Although Kelner et al. (2004) did not address the potential use of CAM by other professions, including Occupational Therapists into their discussion, it can be assumed that barriers to inclusion of CAM by *any* professional within the health care system would be the same, allowing for generalizations to the practice of Occupational Therapy. These restrictions

can be summarized into three main points, namely: regulation/jurisdiction, political considerations, and cost.

Regulatory issues arise if Occupational Therapists become certified in any form of CAM, as it is not clear which regulatory body would then be responsible and provide legal support and coverage to the professional providing CAM treatments. Kelner et al. (2004) recognized this and questioned under which government or regulatory body the definitions for scope of practice and standard of practice would be defined (p.82) (see *Ethical considerations section for further discussion).*

Political considerations center around the difficulty in defining the professions of CAM and Occupational Therapy. The Government of Canada, as of 1996, has been in the process of re-defining professions that provide health care under the "Health Professions Act" [RSBC 1996] Chapter 183 (http://www.qp.gov.bc.ca/statreg/stat/H/96183_01.htm#section2to6, Mar. 18, 05). Presenting definitions of the professions to the governmental board/referees has proven to be problematic, as several professionals and providers of CAM are unsure how to define and describe their own profession's scope of practice. Differences even exist among practitioners of CAM in their *own* definitions of their profession and of their roles, adding to the difficulties in researching CAM and measuring its benefits, as well as its integration into health care (Kelner et al., 2004, p.86).

Finally, providing scientific evidence requires that strict studies be conducted, which are cost prohibitive. Kelner et al. (2004) noted that receiving funding from the government may be difficult, as justifying research expenditures over funding of public health programs/health care may be met with resistance by other professionals as well as

the public. Kelner et al. (2004) further claim that CAM professions currently lack the resources to fund research on their own, potentially creating a negative cycle, as the inability to fund research further contributes to the lack of credible evidence of efficacy, and even safety of treatment forms, which typically form the basis and provide the foundation to receiving funding and grants (p.82).

Establishing concrete reasons why Occupational Therapists may or may not be using CAM is important prior to conducting extensive research on any specific form of CAM as used in, or considered for use in, Rehabilitation Medicine and Occupational Therapy. Determining these reasons would allow future researchers to structure their studies to potentially overcome barriers to inclusion, and allow for higher quality and more rigorous studies of efficacy to be conducted.

Summary of Literature Review

The literature review completed for this study on CAM revealed that research conducted thus far has focused on clinical trials, views of patients and/or purposes for use of each form of CAM. Only one study referring to Occupational Therapy was found (Brown, 2002), which reported the use of CAM in the treatment of pain. Furthermore, no literature referring to the current use of CAM by Canadian or Alberta Occupational Therapists was found. None of the studies reviewed reported on Occupational Therapists' views and to date, no link between CAM and Occupational Therapy has been established.

Literature review showed that the general quality of research into the effectiveness of CAM conducted thus far has been poor due to several methodological problems and scientific limitations. These can be summarized as bias, small sample size, lack of follow-up and lack of rigor in design and execution, as well as lack of consideration of the placebo effect, thereby decreasing their validity and necessitating a continuation of research.

As discussed above, there are many potential reasons why Occupational Therapists may *choose* to incorporate CAM methods into their practice. However, there are also several reasons why Occupational Therapists may *choose not* to incorporate CAM methods into their practice. Currently, there is no formal data on the use of CAM by Alberta Occupational Therapists, leaving several questions unanswered.

Problem Statement

Prior to further research into the effectiveness of CAM in Occupational Therapy practice can be conducted, it would be useful to identify which forms of CAM are currently being used by Occupational Therapists. With this knowledge, focused research questions may then be formulated to discover and analyze whether these forms provide benefits to clients and why. Therefore, the purpose of this study is to determine which forms of CAM are being used and/or referred, as well as how often, and for what purposes CAM is used within the practice of Occupational Therapy, if at all; furthermore, to determine factors preventing Occupational Therapists from currently using and/or referring CAM.

Objectives of Study

The purpose of this study was to question practicing Occupational Therapists within Alberta in order to determine how many are either currently using CAM or providing referrals to CAM practitioners. In addition, the study sought to determine which forms of CAM are most often used, and for what purposes. Furthermore, reasons preventing Occupational Therapists from either using CAM therapies, or providing referrals, were examined. In order to achieve these objectives, seven questions were established:

1) What percentage of Occupational Therapists use each form of the Alternative Medicine therapies selected and described in the literature review, including Acupuncture/Acupressure, Magnetic Therapy, Massage/Reflexology, Therapeutic Touch/Reiki and T'ai Chi?

2) What percentage of clients are treated with each form?

3) For what purposes (i.e. injuries or specific illness) is each form of therapy used?

4) What are the reasons causing Occupational Therapists to avoid using forms of Alternative Medicine if they are not used now?

5) Under what circumstances (e.g. regulations and certifications required) would Alternative Therapies be used by Occupational Therapists?

6) If the forms of Alternative Medicine described are *not* used by Occupational Therapists, would a referral be provided by Occupational Therapists to another professional currently practicing alternative treatments?

7) Under what circumstances would referrals be made?

Chapter 2.1: Methods

Sample

Sample Size

A list of potential study participants was requested from the Alberta Association of Registered Occupational Therapists/Alberta College of Occupational Therapists (AAROT/ACOT). Based on a telephone conversation with AAROT/ACOT (March 2006), there were approximately 1223 active Occupational Therapists (not including students) currently registered and on the contact list, within Alberta for the 2006 registration year. This was a comprehensive list because AAROT/ACOT is the regulatory body for Occupational Therapists within Alberta, and membership of practicing Occupational Therapists is mandatory for legal and insurance purposes. Although AAROT/ACOT has a list of all Occupational Therapists practicing within Alberta, the list provided to researchers would only contain names of the Occupational Therapists who had consented to have their contact information released, thereby providing a high potential for increased rate of return (Appendix I).

Sample Criteria

Inclusion & Exclusion Criteria

The inclusion criteria consisted of all active professionals who allowed release of their names by AAROT/ACOT. All those not meeting the above criteria were excluded. Three active practitioners were also excluded as they participated in the pre-questionnaire discussion group.

Study Design

Description of Questionnaire

Due to the nature of the study, negative effects on validity were anticipated to be minimal. The confidential nature of the questionnaire attempted to minimize response and desirability bias. Mixed methodologies were used to design the questionnaire. Questions were nominal and categorical in nature, supplemented by open-ended/opinion-based questions. Based on the format of the questionnaire and style of questions, the main forms of validity considered were content and face validity.

Justification of Study Design

The study design used a combination of e-mail/internet-based questionnaire, supplemented by mail-out when response by e-mail was not possible or the mail-out version was requested by the respondent. The use of this combination design was justified as it has been associated with decreased costs, a reduction in response burden, and increased response speed as well as in response rate, compared to a mail-out questionnaire alone (Schaefer & Dillman, 1998; Douglas, 2005). Using this method also helped decrease the possibility of sampling bias, as those without Internet access still had the ability to respond (Douglas, 2005).

Schaefer and Dillman (1998) state that the style of communication used in an internet/e-mail questionnaire is similar to self-administered questionnaires; therefore it is assumed that advantages, as well as potential drawbacks may be similar. To compensate for the possibility that questions could have been misunderstood, a brief description of

how to respond to questions was provided. Contact information of the primary researcher was also provided for clarification purposes.

Procedures

Development of the Questionnaire

Based on literature reviewed, the forms of CAM which the author felt were most commonly used by other health care professionals, as well as those with the highest potential for being included in the scope of practice of Occupational Therapy, were included. The questionnaire was composed of quantitative questions (see Appendix II). Clear descriptions of the forms of Alternative Medicine were provided, ensuring all respondents used the same definitions for each form, minimizing ambiguity and supporting consistency of responses.

Questionnaire Directions Provided

Respondents were provided with instructions for completion of the questionnaire (Appendix III.1 & III.2), which consisted of completing all six sections, using the definitions provided for each form of CAM, providing opinions and specifications when requested and skipping certain questions based on responses to others. Demographic response categories were derived from the items and sections found on the AAROT/ACOT registration form (AAROT, 2004). These categories include: gender, age, years of practice, scope of practice (orthotics, palliative care, musculoskeletal disorder, hand therapy, psychiatry, rheumatology, neurology, amputees, developmental disorders, cardiology, administration, researcher, and other), practice setting (hospital, extended care, school, W.C.B, private practice, home care, psychiatric facility, university/research centre), client base (paediatrics, adolescents, adult or geriatrics),

geographical location of practice (urban, rural or metro), and graduating school [See Appendix II.1]

The remainder of the data collected was based on questions relating to the seven objectives of the study, as previously listed. Opinion-based/open-ended questions requesting specifications of respondents' answers were included in questions referring to purpose of use, circumstances under which CAM would/would not be used, as well as those referring to the provision of referrals. In order to maintain consistency, questions for each section of CAM remained the same. Lists were not provided for the opinion-based questions in an effort to decrease social desirability and/or response bias (Appendix II.2).

The introduction letter was structured in a neutral fashion to help maximize the potential that practitioners who are currently against, or not interested in the use of CAM, would still take part in the questionnaire. The importance that all practitioners respond in order to ensure unbiased results was pointed out (Appendix IV & Appendices V.1-V.3).

Questionnaire Adjustment following Completion of Pre-Questionnaire Discussions

The questionnaire was pre-tested by having a small group of 10 Occupational Therapists, drawn from the graduate student population and academics at the University of Alberta, as well as from personal contact with practicing therapists. The questionnaire was adjusted based on feedback received by the pre-questionnaire discussion group. Study questions and response options were expanded and modified for clarity and content. The statement 'in my practice as an Occupational Therapist' and/or 'I have personally used [the indicated form of CAM]' was added to each question to clarify and

reinforce that responses were to be based on personal experience, opinion, and potential for future use.

Reliability & Rigor

In order to help establish rigor, the questionnaire was developed based on strategies and components described within literature as essential to an effective questionnaire (O.Triska, personal communication, October, 2004; Bernard, 2000). Doing so established instrument reliability, which was enhanced through the conduction of the pre-questionnaire discussion group. The pre-questionnaire discussion group was divided into two sub-groups with one group completing the e-mail version and the other the mail-out version. Neither group had contact with the other or knew group participants. Participants within each group completed the questionnaire independently and without discussion, thereby establishing independence of the measurement. Both groups indicated the questionnaire was clear and responded in similar fashion. All participants felt the target population would also respond similarly. Furthermore, both sub-groups completed the questionnaire on separate days, which aided in establishing measurement reliability, as modified forms of test-retest and parallel form testing was thereby completed. In addition, member checking was completed as responses provided by pre-questionnaire discussion group was confirmed during de-briefing sessions conducted with each group, establishing trustworthiness of the questionnaire.

Validity

Participants within the pre-questionnaire group were also asked to comment on the completeness of the questionnaire as well as the content, construct and face validity. Participants were provided with the objectives of the study and asked whether or not the questionnaire successfully addressed all objectives. Survey questions were also discussed for their relevance, as well as their ease of understanding and response. Participants indicated that the questionnaire was sufficiently comprehensive, addressed all objectives and was of appropriate length. It was also stated the questionnaire was written at an appropriate reading level. Participants within the pre-questionnaire discussion group were excluded from the study in order to help establish external validity.

Control for Bias

Response bias was minimized as respondents were given a variety of ways of returning the questionnaire, such as e-mail, fax or postal (Dillman, 1998; Douglas, 2005). Response bias was also minimized due to the confidential nature of the survey. *Desirability/social desirability bias* was minimized due to the confidential nature of the study and the absence of an interviewer. The structure of the introduction letter further minimized bias. *Instrument bias* was minimized by the completion of the pre-questionnaire discussion group.

Sampling

Data Gathering

To ensure that the most recent list of active Occupational Therapists was used, data collection began in March 2006, following the annual registration for AAROT/ACOT. In total, 1123 Occupational Therapists whose names were provided by AAROT/ACOT were contacted. Of those, 876 were contacted by e-mail and 347 were sent the questionnaire by letter mail/mail-out. In an attempt to increase response rate, a brief description and a link to the questionnaire was also sent out in the monthly e-newsletter by the Society of Alberta Occupational Therapists (SAOT). Among the e-mails sent-out, 61 addresses were deemed invalid and one postal address was incorrect, as they were returned with this notation, resulting in 815 valid e-mails and 346 valid mail-outs.

Sample Size Calculation (see Appendix I)

Cochrane's formula (Bartlett, Kotrlik & Higgins, 2001, p.48) for sample size calculation indicated that in order to achieve a 95% confidence interval, **323** responses would be required. However, based on the conservative return rate of 30%, it was anticipated that only **255** responses would be obtained, thus decreasing the confidence interval. (See Appendix I).

Skip Logic Incorporated into Questionnaire

In order to accurately address the study objectives, skip logic was incorporated into the questionnaires. Mail-out respondents were provided with specific directions

within each question directing them to the following question based on their response. On-line respondents received the same directions. However, they were automatically directed to the next question using the "skip logic" process electronically incorporated into the questionnaire, using the on-line software "Survey Monkey". As one of the purposes of the questionnaire was to gather information on reasons preventing Occupational Therapists from incorporating CAM into their practice, respondents indicating 'choose not to respond' were directed through the 'yes' track to ensure their responses would not be included in questions gathering information on reasons why they have not used, or would not use the specified form of CAM (Appendix VII).

Definition of Valid Responses

All e-mail responses were considered valid due to inherently programmed restrictions during the development of the on-line version. Mail-out responses were deemed invalid when respondents did not follow response procedure provided for an individual question or directions provided on flow of questions/skip-logic. To clarify, in terms of the mail-out questionnaire, respondents were directed to only answer certain questions based on their responses to a previous question. If a respondent still provided a response to a specific question, despite previous directions which would have disqualified them as a respondent to that question, their response was deemed invalid and therefore discounted.

Determination of Responses provided

Expected responses were determined based on respondents to previous questions & skip-logic. Respondents expected to respond, who then skipped the question, were not included in the total. See 'calculation of percentages' section for further description.

Availability of Documents

Potential respondents were informed in the introduction letter of a variety of ways to complete and return the questionnaire. E-mail respondents were provided with a direct link to the questionnaire within the e-mail, as well as a website address which contained a printable version. Mail-out respondents were provided with the link to the questionnaire, as well as the web address. Both groups were informed they could contact the researcher if they could not access the website or had difficulty following the link. Two e-mail requests were received stating they could not follow the link. Both respondents were individually e-mailed the questionnaire link. Neither respondent reported continued difficulties with accessing the link. However, as respondents to the questionnaire are anonymous, it is not known if these respondents completed the questionnaire. The on-line questionnaire was programmed during development to only allow one response per IP address, thereby reducing the chances a respondent completed the questionnaire more than once.

All respondents were informed they could either complete the questionnaire on-line or print it off and return it by mail or fax. Three responses were returned by fax and two were printed off and returned by mail. Those not completed on-line were included in the mail-out group, as it was not certain by which recruitment method the questionnaire

was originally received. Although a postage-paid envelope with return address was included in the mail-out version, it can not be confirmed if those receiving the mail-out version used the envelope provided, if a personal envelope was used or if the respondent chose one of the other response methods in order to return the completed questionnaire.

Schedule of Initial and Follow-Up Requests

Data collection began on March 23, 2006. Reminder e-mails were scheduled to be sent at the end of week two (Wednesday April 06, 2006) and four (Thursday April 20th, 2006), however, the final reminder was delayed due to a server failure by AAROT/ACOT until Tuesday April 25th, 2006. Therefore, data collection was extended until Monday, May 8th, 2006. Mail-out responses were requested to be post-dated no later than this date. (Appendix V). Due to financial restrictions, no reminders for the mail-out group were sent.

Data Inclusion and Data Entry

The response deadline as indicated, was extended to May 8th, 2006. Two responses were received one and two months past the deadline, however, they were not included in the questionnaire results as analysis had already been completed. The data from the mailed, faxed and e-mailed questionnaires were entered on-line and exported into an Excel database, where they were then coded. Entries were checked for accuracy to ensure no entry errors were made.

Categorization of Open-ended/Opinion-Based Responses

In order to categorize open-ended/opinion-based responses, all such responses were read multiple times and objectively. All responses were read to provide a basis for understanding the responses provided. Themes, such as positive/negative opinions and interest were listed and categories developed on the third pass, based on common/consistent words and phrases provided by respondents. Based on themes, a list of key words was developed in order to determine criteria for each category. Key words included, but were not limited to: practice setting, research, employer related, training, personal belief(s), evidence, as a specialty and education. All entries were read a fourth time and categorized. Categories were then provided a code, and all open-ended/opinion-based entries within excel were replaced with the appropriate codes (Appendix XII).

Coded Questionnaire

Reponses were coded to ensure accuracy and consistency of data entry. Open-ended responses were analyzed for themes, and a coding system was developed for responses to these questions. Themes were determined based on elaborations provided by respondents, as well as overall tone, be it positive or negative. Key words such as but not limited to, "do not believe", "not permitted", "believe", and "as a specialty" were used to separate positive and negative responses. Responses were then further analyzed to determine the specific response categories, based on specifications/elaborations provided by respondents. Indicators used to specify individual categories included words such as 'employer', 'training', 'education', 'practice setting' and 'legal/regulatory concerns'. Once the coding system was developed, all responses were analyzed a second time and

classified into the appropriate categories. Respondents were classified according to their general opinion/tone of response (i.e.: positive or negative inclination), as well as for their specifications/clarification of response, when appropriate. For example, a response such as "yes….as an adjunct" to a question referring to the respondent's opinion on the incorporation of CAM would be coded as "yes" = 913, as well as 94 = "as an adjunct".

Chapter 2.2: Methods – Data Entry

Data Analysis

To allow for direct comparisons to be made between the on-line and mail-out respondents, the mail-out questionnaires were entered into a separate on-line questionnaire, which was created directly from the original on-line version.

Description of Data

Each form of CAM was analyzed for percentage of use and non-use. Reasons for the use of CAM as a form of treatment, as well as reasons preventing its use, were also summarized in terms of percentage for each response option for each form of CAM. In each case, results were reported whether or not a referral was provided. Reason(s) for the decision whether or not to refer, including under which circumstances a referral *would* be provided, were also analyzed. Finally, respondents were asked whether or not they believe the indicated form of CAM should be included into the scope of practice of Occupational Therapy. Open-ended responses were categorized into three main reasons for positive responses including: i) As an adjunct to Occupational Therapy, ii) Believe it would complement Occupational Therapy/add to the scope of practice, and iii) The form may have benefits to the client. Negative responses were grouped into six categories, including: i) Indifference/no opinion, ii) Legal Aspects, iii) Evidence and/or research-based, iv) Other professionals are more trained, v) Lack of knowledge and/or training, vi) personal bias, vii) Outside scope of practice/does not fit in practice area. The remainder of open-ended responses were grouped into categories titled: 'yes', 'no', 'indifferent', 'unsure', and 'no response' or elaboration provided.

Data Adjustment

Upon creation of the mail-out 'on-line' version, it was discovered a response option was inadvertently left out on the final question in the on-line version. The error occurred in Question 8 of T'ai Chi, asking "under what circumstances *would* a referral be provided", where the response option "Based on personal professional judgement the client may benefit" was left out. Upon analyzing responses, it appears respondents who desired to choose this option stated it in the open-ended section of the question. Among the 77 respondents to Question 8 of T'ai Chi, nine (11.7%) provided an open-ended response; of those, seven stated the missing option as their response. Therefore, open-ended responses referring to professional judgement were analyzed in lieu of the missing option in order to allow more accurate comparisons with the mail-out version.

Expected Response Rate of the Questionnaire

The most common methods for conducting a questionnaire currently used include interview, postal, telephone, e-mail and web-based, as stated by Douglas (2005), Klein (2002) and Kelley (1999). Klein reported that studies using the Internet had response rates from 25%-66% within the first three days (2002, p.341). Researchers examining response rates of Internet questionnaires found rates were the same as for postal questionnaires. In cases where lower response rates were noted, it was suggested that respondents were concerned with having their e-mail addresses attached to their response, or that their identity could be traced by these means (Klein, 2002, p.340).

Previous questionnaires of Canadian Occupational Therapists have yielded a range of response rates, including 25% (Douglas, 2005), 35.5% (Pui, 2002), who

surveyed Alberta Occupational Therapists; 38% (Farrar, 2001), 68% (Law & McColl, 1989) and 86% (Boyd, Pepin & Szabo-Hartin, 1999), as stated by Douglas in 2005. Based on these values, a conservative response rate of 30% was expected (Appendix I).

Ethical Considerations

The study was conducted as a questionnaire and followed all ethical guidelines set out by the Health Research Ethics Board of the University of Alberta (UofA). Based on study design, no harm to participants was anticipated. The time commitment required to respond to the questionnaire was determined during pre-testing of the questionnaire and then indicated on the information sheet as 20-30 minutes. The questionnaire was confidential and only the researchers had access to returned questionnaires. Potential concerns regarding confidentiality were addressed by providing potential respondents with the option of downloading the questionnaire and returning it by mail. No inherent risks were anticipated for the participants, and information and knowledge gained will provide information on the profession of Occupational Therapy, as well as provide basis for further research. Potential respondents were provided with a general description of the purposes of the questionnaire in an information letter sent out with the questionnaire. Participation was voluntary, yet as it was a self-administered questionnaire, return of the questionnaire implied consent.

Chapter 3: Results

Response Rate and Description of Respondents

Actual Response Rate

199 Occupational Therapists completed the questionnaire, resulting in an overall response rate of 17.1%. Of those, a total of 130 valid responses were obtained on-line and 69 were returned by mail, resulting in an e-mail response rate of 15.9% and a mail-out response rate of 19.9%. Table 1 shows the distribution of respondents on various characteristics. Most respondents were female and had been practicing for over 10 years.

Table 1 - Characteristics of respondents (199 respondents)

Characteristics	**Respondents % (n)**
Gender	% (n)
Males	6.5 (13)
Females	92.9 (185)
Choose not to respond	0.5 (1)
Total	100 (199)
Age Group	% (n)
20-25	5.5 (11)
26-30	18.1 (36)
31-35	17.6 (35)
36-40	14.6 (29)
41-45	15.1 (30)
46-52	18.6 (37)
52-65	10.1 (20)
Choose not to respond	0.5 (1)
Total	100 (199)
Years Practicing	% (n)
0-1	5.5 (11)
2-4	14.1 (28)
5-7	12.1 (24)
8-10	13.6 (27)
>10	54.8 (109)
Choose not to respond	0.0 (0)
Total	100 (199)

Table 1 cont'd: Characteristics of respondents

Accredited Program Attended	% (n)
BScOT - UofA	68.3 (136)
BScOT – Other Canadian University	19.6 (39)
BScOT – U.S.A/Other	4.0 (8)
Diploma - UofA	0.5 (1)
Attended >1 Canadian University	1.5 (3)
MScOT – UofA	3.5 (7)
MScOT – Other Canadian University	0.5 (1)
MScOT – U.S.A/Other	1.0 (2)
Choose not to respond	1.0 (2)
Total	100 (199)
Client Base of Practice	% (n)
Pediatrics (0-12)	31.2 (62)
Adolescent (13-17)	17.6 (35)
Adult (18-65)	60.3 (120)
Geriatrics (Over 65)	49.2 (98)
Other	7.5 (15)
Choose not to respond	0.5 (1)
Total *(could choose all that apply)*	331
Scope of Practice	% (n)
Orthotics	13.6 (27)
Palliative Care	18.6 (37)
Musculoskeletal Disorders	36.7 (73)
Hand Therapy	14.6 (29)
Psychiatry	15.1 (30)
Rheumatology	17.6 (35)
Neurology	32.7 (65)
Amputees	10.6 (21)
Developmental Disabilities	24.6 (49)
Cardiology	5.5 (11)
Work Rehab/RTW	6.0 (12)
Administration	12.1 (24)
Researcher	4.5 (9)
Educator	9.0 (18)
Other*[1]	30.2 (60)
Choose not to respond	2.0 (4)
Total *(could choose all that apply)*	504

[1] ******Scope of Practice* "other": autism, frail elderly, psychiatry (2), architectural/accessibility, burns (3), medical-legal consultation (3), general/mixed (4), LTC (2), home care (5), mental health, school skills (3), dysphagia, palliative, orthotics, geriatrics (9), continuing care/dementia (2), community care (3), sensory integration, lifespan, chronic pain (3), injured workers, student health, lymphedema, case management, seating (3), feeding/swallowing, AADL authorizer, population health & health promotion, learning disabilities, fine motor & perception problems with pediatrics, down syndrome, oncology, wound care.

Table 1 cont'd: Characteristics of respondents

Practice Setting – Respondents	% (n)
Hospital	42.2 (84)
Extended Care	17.6 (35)
School	14.6 (29)
W.C.B	4.0 (8)
Private Practice	12.1 (24)
Home Care	24.6 (49)
Psychiatric Facility	3.5 (7)
University/Research Centre	3.5 (7)
Other**[2]	21.6 (43)
Choose not to respond	n/a (0)
Total *(could choose all that apply)*	286
Geographical Area of Practice	% (n)
Urban (town)	35.7 (71)
Rural (country)	24.1 (48)
Metro (city)	57.3 (114)
Choose not to respond	n/a (0)
Total *(could choose all that apply)*	233
Population Size	% (n)
Less than 10,000	11.1 (22)
10,000-99,999	17.6 (35)
100,000-199,999	3.5 (7)
Over 200,000	67.8 (135)
Choose not to respond	1.5 (3)
Total (*could choose all that apply)*	202

Comparison of E-mail vs. Mail-out Respondents

Table 2: Gender distribution

Gender	**Distribution of Respondents % (n)**		
	E-mail	**Mail-out**	**Total**
Males	7.7 (10)	4.3 (3)	6.5 (13)
Females	91.5 (119)	95.7 (66)	92.9 (185)
Choose not to respond	0.8 (1)	0.0 (0)	0.5 (1)
Total	100 (130)	100 (69)	100 (199)

$X^2 = 0.85$, df = 1, p = 0.55

[2]** Respondent *Practice Setting* "other": college (2), non-profit (2), community (15), community psychiatry (2), clinic (3), rehabilitation hospital (2), government/consultation (3), private practice, own holistic business, CKP out-patient, region, clinical leadership unit, continuing care, LTC, researcher in hospital, homes, preschool, private RTW, school, general hospital.

Table 3 - Age group distribution

Age Group	Distribution of Respondents % (n)		
	E-mail	Mail-out	Total
20-25	7.7(10)	1.4 (1)	5.5 (11)
26-30	22.3 (29)	10.1 (7)	18.1 (36)
31-35	16.9 (22)	18.8 (13)	17.6 (35)
36-40	14.6 (19)	14.5 (10)	14.6 (29)
41-45	14.6 (19)	15.9 (11)	15.1 (30)
46-52	14.6 (19)	26.1 (18)	18.6 (37)
52-65	8.5 (11)	13.0 (9)	10.1 (20)
Choose not to respond	0.8 (1)	0.0 (0)	0.5 (1)
Total	100 (130)	100 (69)	100 (199)

$X^2 = 11.12$, df = 6, p = 0.09

Table 4 – Years practicing

Years Practicing	Distribution of Respondents % (n)		
	E-mail	Mail-out	Total
0-1	8.5 (11)	0.0 (0)	5.5 (11)
2-4	16.9 (22)	8.7 (6)	14.1 (28)
5-7	13.1 (17)	10.1 (7)	12.1 (24)
8-10	60.0 (18)	13.0 (9)	13.6 (27)
>10	47.7 (62)	68.1 (47)	54.8 (109)
Choose not to respond	0.0 (0)	0.0 (0)	0.0 (0)
Total	100 (130)	100 (69)	100 (199)

$X^2 = 11.63$*, df = 4, p = 0.05.

*risk estimate using Mantel-Haenszel output within contingency tables, could not be computed

Differences between E-mail and Mail-out Groups

Statistically, based on Chi-square analysis and a 95% confidence interval, no significant differences between the e-mail and mail-out groups were noted in terms of gender or age. In terms of years practicing, a statistical difference was noted when using Chi-square. However, it could not be determined if the difference was between the e-mail and mail-out groups, or across categories within one group, as a risk estimate using a Mantel-Haenszel output within contingency tables, could not be computed. When analyzing years of practice, it was noted that the majority of mail-out respondents had

been practicing for over 10 years, with no respondents indicating having practiced for less than one year. This difference may be attributed to the fact that younger individuals may be more likely to use e-mail than older populations.

Visually, the most apparent difference among the two respondent groups was that the e-mail group consisted of predominantly younger professionals. Most respondents in the e-mail group were aged 26-30, with 22.3% (n = 29) of e-mail respondents falling within this category, as opposed to 10.1% (n = 7) of mail-out respondents. In comparison, the greatest number of the mail-out respondents fell in the age range of 46-52 (n = 18; 26.1%), as opposed to 14.6% (n = 19) of e-mail respondents (Table 2). As demographic differences between the two groups were minimal, the e-mail and mail-out respondents were amalgamated and responses combined in the subsequent analyses.

Calculation of Percentages

Response percentage was calculated based on the total number of respondents to the questionnaire. E-mail respondents n = 130 + mail-out respondents n = 69, *total n = 199*. The denominator used in the calculation of percentages depended on the type of question. The number of respondents for questions with a "Yes/No" response was used as the denominator for the subsequent question(s), as guided by skip-logic incorporated into the questionnaire. As previously stated when describing "skip logic", those selecting "choose not to respond" were directed through the "yes" track. Missing respondents were not included within totals used as denominators, in order to prevent a misrepresentation of data. For questions where respondents could "choose all that apply", the number of possible responses for subsequent questions was determined based on the number of valid respondents (as defined by skip-logic), multiplied by the number of response options within each question, thereby explaining situations in which the denominator was higher than the number of respondents. Response percentage for each question was calculated individually for each form of CAM and based on the number of respondents/total responses received.

Respondents' Answers to CAM Questions

The respondents' answers to the questionnaire are presented in the following sections, separately for each therapy. Respondents were requested to provide specifications/elaborations for certain response options, such as "other" or "would not". However, they did not always do so within the open-ended responses.

Acupuncture & Acupressure (n = 199 respondents)

Of the responding Occupational Therapists, 2.5% (n = 5) reported that they had used acupuncture/acupressure. Of these five, only three reported the percentage of clients on whom they had used acupuncture: one used acupuncture on fewer than 1% of clients, one on 1% of clients, and one on 5% of clients. Tables 5 and 6 show the number of therapists who reported using acupuncture/acupressure for a range of symptoms and medical conditions, respectively. Respondents could choose more than one response. Response options are listed as within the questionnaire.

Table 5: Symptoms treated by therapists using Acupuncture/Acupressure (n = 5)

Response Option - Symptoms	% (n)
Pain	80.0 (4)
Spasticity	20.0 (1)
Stiffness	40.0 (2)
Fatigue	0.0 (0)
Stress	0.0 (0)
Other Symptom*	40.0 (2)
Choose not to respond	0.0 (0)

**Other Symptom*: swelling (1), sleep disorders (1), hypertrophic scar management (1), migraine (1), stiffness (1), spasticity (1).

Table 6: Medical conditions treated by therapists using Acupuncture/Acupressure (n = 5)

Response Option – Medical Conditions	% (n)
Anxiety	0.0
Stress management	40.0 (2)
Neurological disorder[i] – *please specify*	40.0 (2)
Musculoskeletal disorder – *please specify*[ii]	60.0 (3)
Other Medical condition**	20.0 (1)
Choose not to respond	40.0 (2)

[i] *Neurological disorder*: paralysis (1).

[ii] *Musculoskeletal disorders*: fracture(1), tendon repair(1), nerve repair(1), neuropathy(1), muscular pain(1).

***Other Medical condition*: mild menstrual discomfort (1).

Table 7 below shows the reasons listed by therapists who had not used acupuncture/acupressure, for not using it. Therapists could give more than one reason. 194 responses were expected, two of which skipped the question. The greatest percentage of respondents indicated they had *not* personally used acupuncture/acupressure within their practice as they were not trained.

Table 7: Reasons preventing therapists from personally using Acupuncture/Acupressure (192 respondents)

Response Option	% (n)
Not trained	94.8 (182)
Against regulations of governing body	12.0 (23)
I am not aware of illnesses/Dx which could benefit	10.4 (20)
I have no interest in the above method	11.5 (22)
There is not sufficient evidence on the above method	7.8 (15)
Administrative/Logistical reasons*	9.9 (19)
Other**	12.5 (24)
Choose not to respond	1.6 (3)

**Administrative included*: its use fell outside current scope/practice setting (10), a belief other professionals were more trained (1), lack of time/resources (5), lack of support from employer (3)
***Other included: a belief the client would benefit (1), a lack of knowledge/training (7), a belief other professionals were more trained (1), a belief it fell outside the scope of practice (12), personal bias (2), "other reason" (2)

Table 8 shows under what circumstances therapists who had not used acupuncture would use it. Therapists could check more than one response option. One of the expected respondents skipped the question. Based on responses provided, it appears the most common circumstance under which therapists would consider using acupuncture/acupressure, was related to having the correct training/holding the proper certifications.

Table 8: Circumstances under which therapists who had not used Acupuncture/Acupressure would consider using it (193 respondents)

Response Option	% (n)
If I held the proper certifications	82.9 (160)
Supported by governing body	56.0 (108)
Accepted and supported by employer	61.7 (119)
Covered under professional liability insurance	61.1 (118)
Colleagues were openly using	17.6 (34)
Included in scope of practice under "Health Professions Act"	60.6 (117)
Sufficient evidence existed	48.7 (94)
Based on personal professional judgement, client may benefit	55.4 (107)
I would not*	15.0 (29)
Other**	3.6 (7)
Choose not to respond	2.1 (4)

**I would not*: a belief it fell outside the scope of practice (15), a belief other professionals were more trained (4), personal bias (9).
***Other*: if felt client would benefit (1), with sufficient evidence/research (1), dependent on legal aspects/employer (1), time/resources (1), personal bias (1), "yes" (1), "other reason" (2).

Of Occupational Therapists providing a response (n = 196), 27.0% (n = 53) indicated they had prescribed and/or referred a client to acupuncture/acupressure. Of respondents who indicated they *had* used acupuncture/acupressure, the rate of referral was 80% (n = 4). Of the Occupational Therapists responding they had *not* used acupuncture/acupressure, 25.3% (n = 49) had prescribed and/or referred a patient to acupuncture/acupressure. Of those providing a referral, 41.8% (n = 23) made a formal (charted) referral, while 50.1% (n = 28) had suggested and/or referred on a personal note (off the record). Table 9 shows under which circumstances therapists who had not prescribed and/or referred a patient to acupuncture/acupressure would do so. The main circumstance indicated was when the therapist felt, based on their personal professional judgement, the client may benefit. Therapists could choose more than one response. 141 responses were expected, four of which skipped the question.

Table 9: Circumstances under which those who have not referred Acupuncture/Acupressure would consider doing so (137 respondents):

Response Option	% (n)
Patient specifically requested a referral	33.6 (46)
Based on personal professional judgement, client may benefit	48.9 (67)
Supported by governing body	25.5 (35)
Accepted and supported by employer	24.1 (33)
Colleagues were openly providing referrals	9 .5(13)
Covered under professional liability insurance	19.0 (26)
Patient would be covered by their health plan	10.9 (15)
I would not*	30.7 (42)
Other**	10.2 (14)
Choose not to answer	12.4 (17)

**I would not*: [would] if felt client would benefit (1), due to lack of evidence/research (5), [would]as an adjunct (1), lack of knowledge/training (21), legal aspects/employer related (1), a belief its use fell outside the scope of practice (9), personal bias (1), "other reason" (4)
***Other*: [would] if felt client would benefit (1), lack of evidence/research (9), lack of knowledge (6).

Finally, Occupational Therapists were asked to state whether they believed acupuncture/acupressure should be included within the scope of Occupational Therapy practice and why. A list of the most common responses could be generated from what respondents wrote in the open-ended space. In total, 55.7% (107 of 192 valid responses) directly stated they believe acupuncture/acupressure had a place in the scope of practice of Occupational Therapy, whereas 27.1% (n = 52) did not believe acupuncture/acupressure should be included. Another 2.6% (n = 5) were indifferent, two of which indicated it should be included as an adjunct as long as additional training was received. Among the 14.6% (n = 28) responding "unsure", the primary reason for their position was a lack of personal knowledge and/or training 42.9% (n = 12). Specifications/elaborations of responses are categorized within Table 10.

Table 10: Specifications/elaborations of responses provided by responding Occupational Therapists regarding incorporation of Acupuncture/Acupressure into the scope of practice of Occupational Therapy (n = 192)

Specifications/elaborations of responses	*"Unsure"*	*"Indifferent"*	*"Yes"*	*"No"*
Total respondents	*n = 28*	*n = 4*	*n = 107*	*n = 52*
Felt would benefit the client	1	0	30	0
Would add to the scope of practice of Occupational Therapy	1	0	37	0
[due to…] Evidence and/or research	2	0	14	5
As an adjunct with additional training	4	2	46	3
Lack of knowledge and/or training	12	0	2	0
Legal aspects and/or employer related	0	0	2	0
Other professionals are more trained	2	0	1	26
Out of scope of practice of OT and/or Does not fit into current practice setting	5	1	3	24
Personal bias	0	0	0	1
"Other"	0	0	0	0
No time and/or lack of resources	3	0	0	5

Magnetic Therapy (n = 193 respondents)

Of Occupational Therapists responding, two (1.0%) reported that they had used magnetic therapy. Both respondents reported the percentage of clients on whom they had used magnetic therapy was less than 1%. The purpose for use focused on the relief of negative symptoms, specifically pain, spasticity and stiffness, as indicated by both respondents. One respondent specified its use for the treatment of lower back pain, and one respondent indicated rheumatology as a specification provided under 'other medical condition.' As the number of respondents was limited, no table displaying data on purposes of use is provided. Table 11 shows the reasons therapists who had not used magnetic therapy, gave for not using it. Therapists could provide more than one reason.189 responses were expected, one of which skipped the question. When administrative/logistical and 'other' reasons were noted, elaborations were requested, but

not always provided. Based on the responses provided, it appears the most common barrier to using magnetic therapy is a lack of training. Table 12 shows under what circumstances therapists who had not used magnetic therapy would use it. Therapists could check more than one response option.189 responses were expected, one of which skipped the question.

Table 11: Reasons preventing therapists from using Magnetic Therapy (188 respondents)

Response Option	% (n)
Not trained	69.7 (131)
Against regulations of governing body	12.2 (23)
I am not aware of illnesses/Dx which could benefit	34.0 (64)
I have no interest in the above method	39.9 (75)
There is not sufficient evidence on the above method	46.8 (88)
Administrative/Logistical reasons*	5.9 (11)
Other**	12.5 (25)
Choose not to answer	2.1 (4)

**Administrative/Logistical*: evidence/research related (1), lack of knowledge (1), legal aspects/employer related (2), a belief if fell outside scope of practice/current setting (4), lack of time/resources (2), other reason (1)

***Other included*: evidence/research (3), lack of knowledge/training (13), a belief it fell outside current scope/practice setting (6), personal bias (2), lack of time/resources (1).

Table 12: Circumstances under which therapists who had not used Magnetic Therapy would consider using it (185 respondents)

Response Option	% (n)
If I held the proper certifications	50.3 (93)
Supported by governing body	37.3 (69)
Accepted and supported by employer	36.8 (68)
Covered under professional liability insurance	36.8 (68)
Colleagues were openly using	12.4 (23)
Included in scope of practice under "Health Professions Act"	36.8 (68)
Sufficient evidence existed	58.9 (109)
Based on personal professional judgement, client may benefit	34.6 (64)
Choose not to answer	3.2 (6)
I would not*	31.4 (58)
Other**	7.6 (14)

**I would not*: a belief it fell outside the scope of practice (9), a belief other professionals were more trained (2), personal bias (17), evidence/research related (17), lack of knowledge/training (10), "no" (2).
***Other*: felt would add to scope of practice (1), evidence/research related (4), with sufficient knowledge/training (5), time/resources permitted (1), legal aspects/employer related (1), personal bias/reasons (5), "unsure" (2).

Of Occupational Therapists providing a response (n = 192), 1.6% (n = 3) indicated they had prescribed and/or referred a patient to magnetic therapy. None of the respondents who indicated having used magnetic therapy indicated providing a referral. Of Occupational Therapists who had *not* used magnetic therapy, only 1.6% (n = 3) stated they had referred a client to magnetic therapy. Of those indicating their method of referral, none did so formally (charted), while 33% (n = 2) did so on a personal note (off the record); the remainder chose not to specify.

Table 13 shows the circumstances under which therapists who had *not* prescribed and/or referred a patient to magnetic therapy, would do so. Once again, the main response was that based on personal professional judgement, the client may benefit. Therapists could choose more than one response option. 186 responses were expected, six of which skipped the question.

Table 13: Circumstances under which those who have not referred Magnetic Therapy would do so (180 responses)

Response Option	% (n)
Patient specifically requested a referral	21.7 (39)
Based on personal professional judgement, client may benefit	37.2 (67)
Supported by governing body	21.7 (39)
Accepted and supported by employer	19.4 (35)
Colleagues were openly providing referrals	8.3 (15)
Covered under professional liability insurance	18.9 (34)
Patient would be covered by their health plan	9.4 (17)
I would not*	46.1 (83)
Other**	16.1 (29)
Choose not to answer	7.2 (13)

**I would not*: due to evidence/research (27), lack of knowledge/training (30), a belief its use fell outside the scope of practice (5), personal bias (15).
***Other*: [due to] evidence/research (13), lack of knowledge/training (11), personal bias (2), lack of time/resources (1).

Finally, therapists were asked to state whether they believed magnetic therapy should be included within the scope of Occupational Therapy practice and, if so, why. A list of the most common responses could be generated from what respondents wrote in the open-ended space. Of the respondents providing an opinion (n = 187), 15.5% (n = 29) believed that magnetic therapy had a place in the scope of practice of Occupational Therapy. A total of 2.7% (n = 5) were "indifferent", and 30.5% (n = 57) were "unsure". The remaining 51.3% (n = 96) stated that they did *not* believe magnetic therapy should be included in the scope of practice of Occupational Therapy. Of those stating "no", 77% (n = 74) indicated this was due to a lack of evidence, 33.3% (n = 32) felt the use of magnetic therapy fell outside the scope of practice of Occupational Therapy, and 8.3% (n = 8) indicated they felt other professionals were more trained in this form of CAM. Specifications/elaborations of responses are categorized in Table 14.

Table 14: Specifications/elaborations of responses regarding the incorporation of Magnetic Therapy into the scope of practice of Occupational Therapy (n = 187)

Specifications/elaborations of responses	"Unsure"	"Indifferent"	"Yes"	"No"
Total respondents	*n = 57*	*n = 5*	*n = 29*	*n= 96*
Felt would benefit the client	0	1	9	0
Would add to the scope of practice of Occupational Therapy	2	0	5	0
[due to…] Evidence and/or research	10	1	11	74
As an adjunct with additional training	2	2	12	0
Lack of knowledge and/or training	39	1	0	19
Legal aspects and/or Employer related	2	0	0	0
Other professionals are more trained	1	0	0	12
Out of scope of practice of OT and/or does not fit into current practice setting	0	0	0	39
Personal bias	4	0	0	6
"Other"	1	0	2	3
Lack of time and/or resources	0	0	1	3

Massage/Reflexology (n = 192 respondents)

Of Occupational Therapists responding, 23.4% (n = 45) reported that they had used massage/reflexology, with one respondent indicating having used 'massage only'. Among respondents specifying the percentage of clients they had treated with massage/reflexology, numbers included: less than 1% of clients (n = 6), 1% of clients (n = 12), 2% of clients (n = 5), 3% of clients (n = 2), 5% of clients (n = 3), 10% of clients (n = 4), and over 25% of clients (n = 7). Table 15 & 16 report the purposes of use indicated by responding Occupational Therapists having used massage/reflexology. Respondents could choose more than one option. Response options are listed as within the questionnaire.

Table 15: Symptoms treated by therapists using Massage/Reflexology (n = 45)

Response Option	% (n)
Pain	51.1 (23)
Spasticity	40.0 (18)
Stiffness	62.2 (28)
Fatigue	11.1 (5)
Stress	28.9 (13)
Other Symptom*	46.7 (21)
Choose not to answer	13.3 (6)

**Other Symptom*: Pain (2), fibromyalgia (1), scar management (5), edema (3), muscle strain (2), social isolation (1), decreased R.O.M/spasticity (3), fatigue (1), biomedical dysfunction (1), "provide deep pressure to calm & regulate children" (1).

Table 16: Medical Conditions treated by therapists using Massage/Reflexology (n = 45)

Response Option	% (n)
Anxiety	22.2 (10)
Stress management	26.7 (12)
Neurological disorder[†] – *please specify*	44.4 (20)
Musculoskeletal disorder[††] – *please specify*	40.0 (18)
Other Medical condition**	15.6 (7)
Choose not to answer	48.9 (22)

[†]*Neurological disorders*; dementia (1), stroke/CVA (5), MS(1), Guillain-Barre Syndrome (GBS) (1), SCI (2), autism (1), Cerebral Palsy (CP) (6), ABI (1).

[††]*Musculoskeletal Disorders*: arthritis (2), swelling (7), TBI (1), neuropathy (1), tendon repair (1), lymphodema (1), hypomobility (1), muscular dystrophy (1), hand injury (3), spasm (1), scars (1).

* **Other Medical conditions*: migraine (1), "fussy baby" (1), recovery post-surgery (1), stress/anxiety (1), tendonitis (1).

The reasons given by therapists who had not used massage/reflexology for not using it are described in Table 17. Therapists could give more than one reason. 145 responses were expected, four of which skipped the question. Based on responses received, it appears that the primary reason preventing Occupational Therapists from using massage/reflexology within their own practice is due to a lack of training. Table 18 details circumstances under which therapists who had not used massage/reflexology would use it. Among respondents, four indicated they would use massage only and

questioned the use of reflexology. Therapists could check more than one response option. 145 responses were expected, one of which skipped the question.

Table 17: Reasons preventing therapists from using Massage/Reflexology (141 respondents)

Response Option	% (n)
Not trained	92.2 (130)
Against regulations of governing body	14.9 (21)
I am not aware of illnesses/Dx which could benefit	5.7 (8)
I have no interest in the above method	12.1 (17)
There is not sufficient evidence on the above method	7.1 (10)
Administrative/Logistical reasons*	8.5 (12)
Other**	19.9 (28)
Choose not to answer	2.1 (3)

**Administrative/logistical*: legal aspects/employer related (3), a belief other professionals were more trained (3), a belief its use fell outside the scope of practice (2), lack of time/resources (3), "no" (1), "other reason" (1).

***Other*: [would if] felt client would benefit (2), evidence/research (3), knowledge/training (1), legal aspects/employer related (1), belief other professionals were more trained (5), outside scope of practice (13), personal bias/reasons (1), time/resources (3).

Table 18: Circumstances under which therapists who had not used Massage/Reflexology would consider doing so (144 respondents)

Response Option	% (n)
If I held the proper certifications	72.9 (105)
Supported by governing body	50.0 (72)
Accepted and supported by employer	51.0 (74)
Covered under professional liability insurance	48.6 (70)
Colleagues were openly using	16.7 (24)
Included in scope of practice under "Health Professions Act"	48.6 (70)
Sufficient evidence existed	40.3 (58)
Based on personal professional judgement, client may benefit	53.5 (77)
I would not*	25.0 (36)
Other**	5.6 (8)
Choose not to answer	2.8 (4)

**I would not*: a belief other professionals were more trained (11), a belief its use fell outside the scope of practice (10), personal bias/belief (5), lack of knowledge/training (1), legal aspects/employer related (2), personal bias (5), lack of time/resources (3).

***Other*: evidence/research (1), with sufficient knowledge/training (5), others more trained (3), outside scope of practice (2).

Of Occupational Therapists providing a response (n = 190), 44.2% (n = 84) indicated they had prescribed and/or referred a patient to massage/reflexology. Of those who *had* previously used massage/reflexology, the rate of referral was 57.8% (n = 26). Among respondents who had *not* previously used massage/reflexology, 40% (n = 58) had provided a referral. Of all Occupational Therapists providing a referral, 39.3% (n = 35) did so formally (charted), while 41.6 % (n = 37) had done so on a personal note (off the record).

Table 19 shows the circumstances under which therapists who had *not* prescribed and/or referred a patient to massage/reflexology, would do so. 101 responses were expected, three of which skipped the question. Among responses provided, the circumstance listed most often was "based on personal professional judgement, the client may benefit", as indicated by 69.4% (n = 68) of respondents. In addition, 52% (n = 51) of respondents indicated they would provide a referral if the client/patient specifically requested one.

Table 19: Circumstances under which those who have not referred Massage/Reflexology would consider doing so (98 respondents):

Response Option	% (n)
Patient specifically requested a referral	52.0 (51)
Based on personal professional judgement, client may benefit	69.4 (68)
Supported by governing body	26.5 (26)
Accepted and supported by employer	25.5 (25)
Colleagues were openly providing referrals	14.3 (14)
Covered under professional liability insurance	28.6 (28)
Patient would be covered by their health plan	21.4 (21)
I would not*	17.3 (17)
Other**	12.2 (12)
Choose not to answer	6.1 (6)

**I would not*: lack of knowledge/training (2), belief its use fell outside scope of practice (2), personal bias (1), "Other" reason" (6), "no" to reflexology (1).
***Other*: if felt client would benefit (1), evidence/research (2), legal aspect/employer related (1), other professionals more trained (1), scope of practice (1), personal bias/reasons (2).

Finally, therapists were asked to say whether they believed massage/reflexology should be included within the scope of Occupational Therapy practice and why. A list of the most common responses could be generated from what respondents wrote in the open-ended space. Of respondents providing an opinion on the use of these forms (n = 163), 47.2% (n = 77; 15 of which indicated only massage) stated "yes", they believe massage and/or reflexology, should be added to the scope of practice of Occupational Therapy. An additional 4.3% (n = 7) were classified as "indifferent", and 11.7% (n = 19) indicated they were "unsure" at this time, primarily due to a lack of knowledge and/or training and the belief that other professionals were more trained. Of the remaining respondents, 36.8% (n = 60) indicated they did not feel that massage/reflexology should be included into the scope of practice of Occupational Therapy. Reasons provided for their decision included a belief that other professionals were more trained (25.8%; n = 42), and the belief the use of massage/reflexology was outside their current scope of

practice (11.7%; n = 19). Specifications/elaborations of responses are categorized in Table 20.

Table 20: Specifications/elaborations regarding the incorporation of Massage/Reflexology into the scope of practice of Occupational Therapy (n = 163)

Specifications/elaborations of responses	"Unsure"	"Indifferent"	"Yes"	"No"
Total respondents	*n = 19*	*n = 7*	*n = 77*	*n= 60*
Felt would benefit the client	1	2	20	0
Would add to the scope of practice of Occupational Therapy	1	0	20	0
[due to…] Evidence and/or research	3	0	11	2
As an adjunct with additional training	2	4	31	2
Lack of knowledge and/or training	4	0	1	1
Legal aspects and/or employer related	1	0	1	2
Other professionals are more trained	4	3	1	42
Out of scope of practice of OT and/or Does not fit into current practice setting	2	1	1	19
Personal bias	0	0	0	4
"Other"	0	1	1	1
Difference in opinion on grouped forms	n/a	n/a	16	n/a
Lack of time/resources	3	1	1	3
"Indifferent"	0	n/a	0	0
No response provided	0	0	5	0
No – Massage	n/a	n/a	n/a	1
No – Reflexology	n/a	n/a	n/a	4

Therapeutic Touch (TT)/Reiki (n = 189 respondents)

Of Occupational Therapists responding, 3.2% (n = 6) reported that they had used TT/reiki.). All respondents indicated the percentage of clients on whom they have used TT/reiki: one used TT/reiki in the past only, one used it on 1% of clients, two used it on 5% of clients, and two indicated having used it on over 25% of clients.

Purposes for use were primarily for the treatment of symptoms such as stress (100%, n = 6) and pain (83.3%, n = 5). Medical conditions primarily listed by respondents were anxiety and stress management (66.7%; n = 4). Tables 21 and 22 show the number of therapists who reported using TT/reiki for a range of symptoms and medical conditions, respectively. Therapists could indicate more than one response. Response options are listed as within the questionnaire.

Table 21: Symptoms treated by therapists using Therapeutic Touch/Reiki (6 respondents)

Response Option	% (n)
Pain	83.3 (5)
Spasticity	33.3 (2)
Stiffness	0.5 (3)
Fatigue	0.5 (3)
Stress	100.0 (6)
Other Symptom*	33.3 (2)
Choose not to answer	16.7 (1)

**Other symptoms*: decreased range of motion (1), pain (1), "with palliative care patients" (1), One respondent also indicated having used TT on themselves "*in preparation towards dealing with 'difficult' clients*".

Table 22: Medical conditions treated by therapists using Therapeutic Touch/Reiki (6 respondents)

Response Option	% (n)
Anxiety	66.7 (4)
Stress Management	66.7 (4)
Choose not to Answer	100.0 (6)
Neurological disorder[†] – *please specify*	16.7 (1)
Musculoskeletal disorder[‡] – *please specify*	16.7 (1)
Other Medical condition**	16.7 (1)

[†]*Neurological disorder*: CP (1), Autism (1).
[‡]*Musculoskeletal disorder: no elaboration provided*
***Other Medical conditions*: nerve entrapment (1), multiple tendon & nerve lacerations/repair (1).

Table 23 shows the reasons given by therapists who had *not* used TT/reiki, for not using it. Therapists could give more than one reason. 181 responses were expected, three

of which skipped the question. Based on responses, the primary reason therapists provided for not personally using TT/reiki was due to a lack of training (71.3%; n = 127). Other major reasons included a belief that there was not sufficient evidence on the use of the method and its benefits, as stated by 36.5% (n = 65) of respondents, and a lack of interest in TT/reiki (36%; n = 64).

Table 23: Reasons preventing therapists from using Therapeutic Touch and/or Reiki (178 respondents)

Response Option	% (n)
Not trained	71.3 (127)
Against regulations of governing body	14.6 (26)
I am not aware of illnesses/Dx which could benefit	20.8 (37)
I have no interest in the above method	36.0 (64)
There is not sufficient evidence on the above method	36.5 (65)
Administrative/Logistical reasons*	5.6 (10)
Other**	12.4 (22)
Choose not to answer	5.6 (10)

**Administrative/logistical*: would add to scope of practice (1), lack of knowledge/training (1), legal aspects/employer related (4), a belief its use fell outside the scope of practice (1), lack of time/resources (2)
***Other*: felt would benefit client (1), legal aspect/employer related (1), evidence/research (3), knowledge/training (6), scope of practice (8), personal bias/reasons (2), time/resources (2).

Table 24 indicates under what circumstances therapists who had not used TT/reiki would use it. Therapists could check more than one response option. 181 responses were expected, two of which skipped the question. Once again, the most common response was "if proper certifications were held", as listed by 48.6% of respondents (n = 87). Although 40.2% of respondents (n = 72) indicated they "would not" use TT/reiki, some elaborations provided could be classified as circumstances under which therapists may consider the use of TT/reiki as listed in the questionnaire. Among respondents indicating they "would not"" provide TT/reiki, elaborations provided were mainly a belief that it fell outside the scope of practice of Occupational Therapy and/or did not fit into their current

practice setting (26.4%; n = 19), and personal biases (25%; n = 18). Requiring more evidence and/or research prior to considering its use was stated by 19.4% of respondents (n = 14), as well as a general lack of knowledge on this form of CAM (12.5%; n = 9).

Table 24: Circumstances under which therapists who had not used Therapeutic Touch and/or Reiki would consider using it (179 respondents)

Response Option	% (n)
If I held the proper certifications	48.6 (87)
Supported by governing body	33.5 (60)
Accepted and supported by employer	33.0 (59)
Covered under professional liability insurance	34.1 (61)
Colleagues were openly using	10.1 (18)
Included in scope of practice under "Health Professions Act"	31.8 (57)
Sufficient evidence existed	36.3 (65)
Based on personal professional judgement, client may benefit	36.9 (66)
I would not*	40.2 (72)
Other**	3.9 (7)
Choose not to answer	5.6 (10)

**I would not*: a belief its use fell outside the scope of practice (19), a belief other professionals were more trained (12), personal bias/beliefs (18), lack of evidence/research (14), lack of knowledge/training (9), lack of time/resources (3).
***Other*: evidence/research (3), knowledge/training (2), time/resources (2), other professionals more trained (2), personal bias/belief (2).

Of Occupational Therapists providing a response (n = 189), 6.9% (n = 13) indicated they had prescribed and/or referred a patient to TT/reiki. Of respondents indicating they *had* personally used TT/reiki, 33.3% (n = 2) had also provided a referral. Of respondents indicating they had *not* used TT/reiki (n = 181), 6.1% (n = 11) stated they had, however, referred/prescribed a client to TT/reiki. Of those providing referrals, 5.9% (n = 1) made a formal (charted) referral, while 58.8% (n = 10) had prescribed and/or referred TT/reiki on a personal note (off the record).

Table 25 shows the circumstances under which therapists who had *not* prescribed and/or referred a patient to TT/reiki would do so. 172 responses were expected, seven of which skipped the question. Respondents could choose more than one response. Based on responses provided, professional judgement was listed as the most common circumstance under which an Occupational Therapist would provide a referral.

Table 25: Circumstances under which those who have not referred Therapeutic Touch and/or Reiki would consider doing so (165 respondents)

Response Option	% (n)
Patient specifically requested a referral	32.1 (53)
Based on personal professional judgement, client may benefit	35.2 (58)
Supported by governing body	21.2 (35)
Accepted and supported by employer	19.4 (32)
Colleagues were openly providing referrals	7.9 (13)
Covered under professional liability insurance	18.8 (31)
Patient would be covered by their health plan	9.7 (16)
I would not*	42.4 (70)
Other**	9.7 (16)
Choose not to answer	9.1 (15)

**I would not*: evidence research related (16), lack of knowledge/training (23), legal aspects/employer related, belief its use fell outside the scope of practice (7), personal bias/beliefs (13), "unsure" (1), "other" reason provided (9)

***Other*: if felt client would benefit, evidence/research related (7), knowledge/training (2), time/resources (2), "no" (1), "other reason" (1)

Finally, therapists were asked to state whether they believed TT/reiki should be included within the scope of Occupational Therapy practice and if so. A list of the most common responses could be generated from what respondents wrote in the open-ended space. Of all respondents to the questionnaire, 147 provided an opinion on the inclusion of TT/reiki into the scope of practice of Occupational Therapy. Of those, 32.7% (n = 48) stated "yes", they believed TT/reiki should be added to the scope of practice of

Occupational Therapy, 37.5% (n = 18) of which directly stating they believed adding TT/reiki would add to the scope of practice of Occupational Therapy. An additional 35.4% (n = 17) felt TT/reiki should be added as an adjunct. Among those stating "no" (24.5%; n = 36), the primary reason stated was due to a belief its use fell outside the scope of practice of Occupational Therapy. Among the 24.5% (n = 36) indicating they were "unsure", the primary elaboration given was due to a lack of knowledge and/or training. Finally, 4.1% (n = 6) indicated they were "indifferent".

Specifications/elaborations of responses are categorized in Table 26.

Table 26: Specifications of responses regarding the incorporation of Therapeutic Touch and/or Reiki into the scope of practice of Occupational Therapy (147 respondents)

Specifications/elaborations of Responses	"Unsure"	"Indifferent"	"Yes"	"No"
Total respondents	*n = 36*	*n = 6*	*n = 48*	*n= 57*
Felt would benefit the client	1	0	10	1
Would add to the scope of practice of Occupational Therapy	1	0	18	0
[due to…] Evidence and/or research	7	0	9	25
As an adjunct with additional training	1	3	17	3
Lack of knowledge and/or training	13	1	0	2
Legal aspects and/or employer related	1	0	1	0
Other professionals are more trained	2	1	2	22
Out of scope of practice of OT and/or does not fit into current practice setting	1	1	2	32
Personal bias	1	0	0	12
Lack of time and/or resources	3	0	1	1
No response provided	0	1	0	8

T'ai Chi (n = 189 respondents)

Of all Occupational Therapists responding, 8.5% (n = 16) reported that they had used T'ai Chi. Two respondents stated they had treated less than 1% of their clients with T'ai Chi, three had treated 1% of clients, two had treated 2% of clients, and one respondent indicated having treated 5% of clients. Tables 27 and Table 28 report the purposes of use indicated by responding Occupational Therapists having used T'ai Chi. Respondents could choose more than one option. Response options are listed as within the questionnaire.

Table 27: Symptoms treated by therapists using T'ai Chi (16 respondents)

Response Option	% (n)
Pain	12.5 (2)
Spasticity	12.5 (2)
Stiffness	31.3 (5)
Fatigue	6.3 (1)
Stress	56.3 (9)
Other Symptom*	43.8 (7)
Choose not to answer	31.3 (5)

* *Other Symptoms*: depression; an education tool when dealing with (1), or to help relieve stress associated with chronic pain (1); as a form of relaxation (1); to help balance to allow for an increase in community participation (1), as an exercise to start a physical conditioning program (1).

Table 28: Medical Conditions treated by therapists using T'ai Chi (16 respondents)

Response Option	% (n)
Anxiety	37.5 (6)
Stress Management	62.5 (10)
Neurological disorder[†] – *please specify*	18.8 (3)
Musculoskeletal disorder[‡] - *please specify*	18.8 (3)
Other Medical condition**	18.8 (3)
Choose not to Answer	31.3 (5)

[†]*Neurological disorder*: fall prevention and stroke/Traumatic Brain Injury (1), as well as fall prevention due to a musculoskeletal disorder (1).

[‡]*Musculoskeletal disorder*: wheel chair bound clients (1).

***Medical conditions*: anxiety (1), stress management (1), "wheel chair bound" clients (1), chronic pain (1), chronic respiratory illness (Chronic Obstructive Pulmonary Disorder (COPD)) (1).

The following table shows the reasons given by therapists who had *not* used T'ai Chi for not using it. 172 responses were expected, six of which skipped the question. Therapists could give more than one reason.

Table 29: Reasons preventing therapists from using T'ai Chi (166 respondents)

Response Option	% (n)
Not Trained	86.1 (143)
Against Regulations of governing body	7.8 (13)
I am not aware of illnesses/Dx which could benefit	10.8 (18)
I have no interest in the above method	12.7 (21)
There is not sufficient evidence on the above method	9.0 (15)
Administrative/Logistical reasons*	7.2 (12)
Other**	11.4 (19)
Choose not to answer	6.0 (10)

**Administrative/Logistical*: legal aspects/employer related (2), a belief other professionals were more trained (2), a belief its use fell outside the scope of practice (3), lack of time/resources (4).
***Other*: evidence/research related (17), lack of knowledge/training (3), a belief other professionals were more trained (3), a belief its use fell outside the scope of practice (8), lack of time/resources (2).

Table 30 shows under what circumstances therapists who had not used T'ai Chi would use it. 172 respondents were expected, 173 answered the question. Therapists could check more than one response option.

Table 30: Circumstances under which therapists who had not used T'ai Chi would consider using it (173 respondents).

Response Option	% (n)
If I held the proper certifications	62.4 (108)
Supported by governing body	32.9 (57)
Accepted and supported by employer	35.3 (61)
Covered under professional liability insurance	34.1 (59)
Colleagues were openly using	12.7 (22)
Included in scope of practice under "Health Professions Act"	32.9 (57)
Sufficient evidence existed	31.8 (55)
Based on personal professional judgement, client may benefit	53.8 (93)
I would not*	22 (38)
Other**	5.2 (9)
Choose not to answer	5.8 (10)

**I would not*: a belief that its use fell outside the scope of practice (11), a belief that other professionals were more trained (12), personal bias/beliefs (2), lack of knowledge/training (2), lack of time/resources (2)
***Other*: felt would benefit client, knowledge/training, time/resources (2), other professionals more trained (1), scope of practice (4).

Of Occupational Therapists providing a response (n = 189), 30.7% (n = 58) indicated they had prescribed and/or referred a patient to T'ai Chi. Of respondents indicating they *had* used T'ai Chi, 68.8% (n = 11) stated they had referred/prescribed a client to T'ai Chi. Of respondents who had indicated they had *not* personally used T'ai Chi, 27.3% (n = 47) had provided a referral/prescribed a client to T'ai Chi. Of respondents indicating having provided a referral, 51.6% (n = 32) made a formal (charted) referral, while 38.7% (n = 24) did so on a personal note (off the record).

Table 31 shows the circumstances under which therapists who had *not* prescribed and/or referred a patient would do so. 127 responses were expected, four of which skipped the question. Respondents could choose more than one response. The most common circumstance under which a referral would be provided was if a patient specifically requested a referral (48.8%; n = 60).

Table 31: Circumstances under which those who have not referred T'ai Chi would consider doing so (123respondents).

Response Option	% (n)
Patient Specifically Requested a Referral	48.8 (60)
Based on personal professional judgement, client may benefit^	29.3 (36)
Supported by governing body	24.4 (30)
Accepted and Supported by Employer	25.2 (31)
Colleagues were openly providing referrals	11.4 (14)
Covered under professional liability insurance	21.1 (26)
Patient would be covered by their health plan	10.6 (13)
I would not*	18.7 (23)
Other**	21.1 (26)
Choose not to answer	13.8 (17)

**I would not*: felt would benefit client (1), lack of knowledge/training (6), a belief its use fell outside the scope of practice (6), personal bias/reasons, no elaboration provided (5), "no" (1), "other reasons" (5).
***Other*: felt would benefit client (9), evidence/research (3), knowledge/training (2), legal aspects/employer related, other professionals more trained (3), time/resources (2), "yes" (3), "other reasons" (12).

Adjustment of Data

A post-data collection adjustment was made in T'ai Chi due to a logistical error that inadvertently occurred during the development of the on-line questionnaire. Specifically, the option "based on personal professional judgement the client would benefit" was left out as a response option. Upon analyzing responses, it appears respondents who desired to choose this option stated it in the open-ended section of the question. Therefore, in order to conduct a general analysis, the number of on-line respondents was calculated based on their open-ended/ "other" response. Among the 77 respondents to question 8 of T'ai Chi, nine provided an open-ended response; of those, seven stated the missing option as their response. However, the resulting percentage of on-line respondents indicating this as a circumstance was lower than in the remainder of the survey, therefore assumptions based on responses throughout the remainder of the

survey were made. The average number of respondents indicating option "based on personal professional judgement, client may benefit" across the remaining forms of CAM was n = 46, and the average percentage of respondents choosing this option was 50.5%. Therefore, if the average number of respondents is used and extrapolated into T'ai Chi, a response percentage of 59.7% would be expected (average respondents/total respondents for T'ai Chi Question 8 = 46/77). It can thus be assumed that the total percentage of respondents who would have indicated they would provide a referral if "based on personal professional judgement client may benefit" would have fallen between 50.5-59.7%, had the response option been included (Table 31.2).

Table 31.2: Extrapolation of response percentage for T'ai Chi question 8, response option 'based on personal professional judgement'.

Form of CAM	Respondents choosing "Based on personal professional judgement, client may benefit"	% Total
Acupuncture/Acupressure	48	51.6
Magnetic Therapy	48	40.3
Massage/Reflexology	48	73.8
Therapeutic Touch and/or Reiki	39	36.4
Average	*46*	*50.5*

Finally, therapists were asked to indicate whether they believed T'ai Chi should be included within the scope of Occupational Therapy practice and if so, why. A list of the most common responses could be generated from what respondents wrote in the open-ended space. Of those providing a response for T'ai Chi (n = 171), 43.9% (n = 75) stated "yes", they believed T'ai Chi should be added to the scope of practice of Occupational Therapy, with 41.3% (n = 31) directly stating such within elaborations provided. 45% (n = 77) of respondents stated "no", they did not believe T'ai Chi should

be included within the scope of practice of Occupational Therapy. The primary reason stated was a belief that other professionals were more trained. An additional 9.4% (n = 16) were "unsure", and 1.8% (n = 3) stated they were indifferent.

Specifications/elaborations provided are categorized within Table 32.

Table 32: Specifications/elaborations regarding the incorporation of T'ai Chi into the scope of practice of Occupational Therapy (n = 171)

Specifications/elaborations of Responses	"Unsure"	"Indifferent"	"Yes"	"No"
Total respondents	*n = 16*	*n = 3*	*n = 75*	*n= 77*
Felt would benefit the client	3	2	31	2
Would add to the scope of practice of Occupational Therapy	2	0	25	0
[due to…] Evidence and/or Research	5	1	7	12
As an adjunct with additional training	2	1	25	1
Lack of knowledge and/or training	5	0	0	3
Legal aspects and/or Employer related	0	0	2	0
No time and/or Lack of resources	0	2	2	33
Other professionals are more trained	2	2	0	31
Out of scope of practice of OT and/or Does not fit into current practice setting	0	0	0	6
Lack of time and/or resources	3	1	1	2

Chapter 3.2 – Summary of Results

Based on aggregated responses, 62 *individual* respondents (31.2% of 199) indicated having used *at least* one form of CAM. Among these, 11 (5.5% of 199) respondents indicated having used >1 form of CAM. Purposes for use, as indicated by respondents (n = 74), focused on the treatment of symptoms. Respondents indicated treating pain (47.3%; n = 35), spasticity (32.4%; n = 24), stiffness (52.7%; n = 39), and stress (37.8%; n = 28), as well as stress management listed as a medical condition (37.8%; n = 28) most often.

Reasons preventing CAM's use included lack of training (82.4%), a lack of personal interest (23.0%) and/or a lack of supporting evidence (22.3%). Considerations of incorporating CAM into Occupational Therapy focused on holding the proper certifications (63.3%), and "based on professional judgement the client would benefit" (46.6%), ranking above employer-related circumstances (43.6%) and whether the form was covered by professional liability insurance (43%) (Appendix X).

In terms of provision of referrals, a total of 75 (37.7%) *individual* respondents indicated having provided a referral to at least one form of CAM, with 40 (20.1%) respondents having prescribed and/or referred >1 form of CAM. When all reports of referrals were considered, 39.7% (n = 91) were done formally/charted, and 44.1% (n =101) were provided on a personal note/off the record. If a referral had not been provided, circumstances under which referrals *would* be made were primarily based on professional judgement (31.1% of responses), and if the patient specifically requested a referral (26.5% of responses). Although 26.4% of responses provided indicated respondents "would not provide a referral", a large portion (n = 82; 35.3% of responses)

indicated it was due to a lack of [respondents'] knowledge and/or training, and 48 (20.7%) stated it was due to a lack of evidence/research.

Categorizing respondents on an individual basis, it was determined that the majority included CAM into their practice either through personal use, by referral, or a combination of use and referral. Overall, 137 *individual* respondents (68.8%) have either *used* or *referred* at least one form of CAM. The remaining 52 (26.1%) respondents indicated they have never personally used *or* never prescribed and/or referred a patient to *any* form of CAM (Appendix XI; Table 40.4).

Opinions on the incorporation of CAM into Occupational Therapy were generally positive, and elaborations of negative responses indicated that further supporting evidence on forms of CAM and related research may result in changes of opinion. When respondents were asked if they believed the indicated form should be included into the scope of practice of Occupational Therapy, as well as *why* or *why not*, the majority of respondents seemed open to the inclusion of one or more forms of CAM. All respondents had the option of providing an opinion on each form of CAM included within the questionnaire. Therefore, the number of *potential* responses was calculated as the total number of respondents to the final question X the number of forms of CAM. As previously mentioned under calculation of percentages, for the purpose of analysis, percentages for the final question were based on total responses for each question/total responses within each categorization. Overall, 336 (33.7%) of possible responses (199 responses x 5 sections = 995) indicated the respondent *did* believe that at least one of the forms of CAM within the questionnaire should be included. 26 responses (2.6%) indicated the respondent was 'indifferent', and 156 responses (15.7%) indicated the

respondent was "unsure". Of those classified as 'indifferent' or 'unsure', 75 stated it was due to their own lack of knowledge and/or training in CAM, which prevented them from deciding either way. Furthermore, 29 respondents stated their indecision at the time was due to a lack of evidence on the form of CAM discussed, and 13 felt there were other professionals within the community who were more qualified and/or already providing the service, causing respondents to question whether or not Occupational Therapists should also offer CAM as a treatment option.

When the forms of CAM included in the questionnaire are ranked based on their level of incorporation into the practice of respondents, the order remains consistent throughout, regardless of whether the forms of CAM are ranked in terms of "use", "referral" or "use and referral". Overall, it appears that the form of CAM most often incorporated into a respondent's practice is Massage, followed by T'ai Chi, Acupuncture/Acupressure, Therapeutic Touch/Reiki and Magnetic Therapy, respectively.

Representation of Data in Comparison to AAROT/ACOT and Alberta Practitioners

Based on Chi-square analysis in terms of age, gender, years of practice, scope of practice, client base of practice and practice setting, no significant differences between respondents' data and AAROT/ACOT data were noted (Table 34). Furthermore, as AAROT/ACOT is representative of Alberta Occupational Therapists, and the sample used for this study is similar in characteristics, the sample appears to be representative of the population. The 95% confidence level which was projected based on the target sample was not achieved. However, based on Cochrane's Formula, it should be noted that a total of 150 responses would have resulted in a confidence interval of 90%.

Using the actual response rate (n = 199), a t-value was calculated using Cochrane's formula in order to confirm a range for the study's confidence interval. Doing so, it can be concluded that the confidence interval of the study lies between 90-95%. This range was confirmed, using the 'sample size calculator' by Pearson Education NCS. Using the software provided, it was determined that using p = 0.5, a sample size of 199 would result in a confidence interval between 90%-95%, with a margin of error of 5.3% and 6.3% respectively (http://survey.pearsonncs.com/sample-calc.htm, retrieved May 28, 2007), thereby establishing external validity (Appendix I).

Comparison to AAROT/ACOT (n = 1001)

Table 33: Characteristics of members as provided by AAROT/ACOT

Characteristics	
Gender	**% (n)**
Males	9.6 (96)
Females	90.4 (905)
Choose not to respond	n/a
Total	100 (1001)

Table 33 cont'd: Characteristics of members as provided by AAROT/ACOT

Age Group	**% (n)**
20-25	6.8 (98)
26-30	20.1 (290)
31-35	20.6 (296)
36-40	15.6 (225)
41-45	13.6 (196)
46-52	13.3 (191)
53-65	10 (144)
Over 65	0.5 (7)
Total responses provided	*1440*

Table 33 cont'd: Characteristics of members as provided by AAROT/ACOT

Years Practicing	**% (n)**
>1	6.2 (66)
1-2	2.8 (30)
3-5	18.8 (199)
6-10	22.7 (240)
11-20	27.7 (293)
>20	21.7 (230)
Total responses provided	1058

Table 33 cont'd: Characteristics of members as provided by AAROT/ACOT

Client Base of Practice	**% (n)**
Pediatrics (0-12)	25.1 (251)
Adolescent (13-17)	9.4 (94)
Adult (18-65)	42.7(427)
Geriatrics (Over 65)	27.4 (274)
Other	18.6 (186)
Choose not to respond	n/a
Total *(could choose all that apply)*	1232

Table 34: Chi-Square Analysis for Respondents and AAROT/ACOT (p = 0.05)

Chi-Square analysis	Age	Gender	Years of practice	Scope of practice	Client base of practice
X^2	42	6.00	12.0	156	20
p	0.227	0.199	0.213	0.233	0.220
df	36	4	9	144	16

DISCUSSION

The main purpose of this thesis was to document the percentage of CAM use, opinions of CAM use by Alberta Occupational Therapists, as well as reasons currently preventing Occupational Therapists from using and/or referring CAM. In doing so, it was hoped that a better understanding of the role of CAM within the practice of Occupational Therapy would be gained. The use of CAM is not limited to any one group. The general public, healthcare professionals such as doctors, nurses, physiotherapists as well as Occupational Therapists, have been reported to use CAM. Occupational Therapists form only a subgroup within this broader context of healthcare professionals and general population. Therefore, the initial expectation prior to conducting this study would have been that CAM usage amongst Occupational Therapists would be similar to CAM usage by other health care professions or by the population in general. In this study, it was found that 68.8% of respondents (n = 137) have used and/or referred their clients to at least one form of CAM. In comparison, it is estimated that between 60-80% of Europeans and Americans have used CAM, either as part of their primary care or as an adjunct (Eisenberg, 1998; Holleran, 2005; Nottingham, 2006). This indicates that Occupational Therapists, at least in Alberta, appear to be using CAM at a similar rate as other professionals, albeit on the lower end of the spectrum.

There is limited data indicating the percentage of CAM use/referral by other healthcare professionals. Specific percentages varied, depending on the population/profession, yet ranged from 52-75% (Burg, in Bascom, 2002; Nottingham, 2006). Furthermore, in 2002 Bascom reported on a 1998 study by Wetzel which reported that 60% of medical schools had started teaching CAM.

CAM usage by the Canadian public tends to be substantially lower. In a paper for Health Canada, De Bruyn (2002) reported that only 3-9% of the population in the Atlantic provinces consulted a CAM practitioner. This number rose to 15% in Quebec and Ontario, and to 21-25% in the Western provinces, with Alberta showing the highest percentage. Although in 2002, a report by Bodeker and Kronenberg showed a rate of 70%, the number decreased in 2003, Statistics Canada (Park) reported that 20% of Canadians, and more specifically, 27.5% of Albertans aged 12 or older reported using CAM (p.39-42). Thus, the usage of CAM by Occupational Therapists in Alberta appears to be related to the usage of CAM by the general population, as 31.2% of respondents had indicated having used CAM.

The rate of referral of healthcare professionals previously reported is similar to the rate of referral as indicated by respondents to this questionnaire. A study by Astin (1998) suggested that 58-85% of Canadian physicians referred their patients to chiropractic, and 42-68% referred to acupuncture. These rates are considerably higher than Alberta's Occupational Therapists' referral rate (37.7% of respondents). However, the rate of referral by respondents is similar to the rate of usage by the general population, thereby indicating a relation between public use and professionals' referral.

Comparing Respondents' Purposes for CAM Use to Treatment Benefits Reported within Literature

Analysis of the questionnaire responses indicates that 62 (31.2%) of the 199 respondents have personally *used* at least one form of CAM within their practice. It is important to determine if therapists are using CAM in an evidence-based manner and if they are using CAM appropriately as is supported within the literature. Whether or not the forms of CAM are effective were not discussed, as one of the objectives of this study was to determine purposes for CAM use by respondents and compare it with benefits reported within the literature, not analyze treatment effectiveness. Furthermore, the spectrum of purposes for use listed by respondents may not include all treatment benefits indicated within literature. The main goal of this section was to examine and demonstrate that respondents' treatment goals in using CAM were consistent with what relevant literature has reported as being treatment benefits of each form of CAM. Therefore, no further analysis of benefits listed within the literature, but not addressed by respondents, was conducted at this time.

Massage and Reflexology

Massage was the form of CAM used most often by respondents. The higher percentage of use in comparison to other forms of CAM included in this study, could be due to it being a commonly used treatment form within health care. Therefore, many Occupational Therapists may be aware of the research on its benefits and may have used a modified form themselves. Analyzing responses for treatment effectiveness and purposes of use, consistency between this study's results [as indicated in brackets], and

previous literature/research findings was apparent. It appears that respondents indicated using massage/reflexology for similar reasons as reported within relevant literature. Specific medical conditions benefiting from massage/reflexology listed within the literature included: diabetes [neuropathy], fibromyalgia [pain], sleep disorders - such as chronic fatigue syndrome and insomnia [fatigue], stress/anxiety disorders [listed by respondents as both a symptom and as a medical condition], muscle spasm [Cerebral Palsy (CP), stiffness], depression [social isolation], autism [listed as such], arthritis [listed as such] and soft tissue dysfunctions (Field in Jonas & Leving, 1999; Greene, 2000; Sieve-Nier et al., 2003). Field (2000, p.385) also noted an increase in immune function. Sieve-Nier et al. (2003) noted the positive effects of reflexology on patients with Multiple Sclerosis (MS), including decreased pain levels, spasticity, as well as paresthesia, all of which were also indicated by, or resulted from medical conditions listed by respondents within this study. The large literature base describing multiple treatment benefits of massage/reflexology supports the suggestion that its common use by Occupational Therapists, and/or knowledge on its use, is affected by the availability of literature. Overall, it appears that Occupational Therapists in Alberta utilize massage/reflexology for reasons consistent with those cited in the literature

T'ai Chi

Similar to massage/reflexology, there was apparent consistency between respondents' purposes for use and previously reported benefits of T'ai Chi. Benefits of T'ai Chi included positive effects on a variety of physical systems such as respiratory and cardiac, as well as physical functioning. T'ai Chi has also been used as a physical

conditioning program, as reported by respondents and supported by Ching et al. (2002). Examples of T'ai Chi being used in the treatment of chronic cardiac conditions was consistent with research conducted by Davis (2004). Finally, using T'ai Chi as a major part in fall prevention training, can be linked to reports by Jacobson et al. (1997) who discussed the effect on balance, kinaesthetic sense and strength. As well, Davis (2004) and Bottomley (2004) reported positive effects on coordination, endurance, and flexibility. Such benefits may also help in the reduction and treatment of stiffness, which respondents listed as a treatment goal. Respondents' use of T'ai Chi as a stress management method is supported by Davis (2004), who indicated T'ai Chi's positive effect on anxiety, as well as by Ching et al. (2002) and by Jin (1996), who reported stress reduction as a beneficial result of incorporating T'ai Chi as a treatment modality. Literature also supported using T'ai Chi to aid in the treatment of depression, both directly, with a reduction of mood disturbances (Brown et al., 1995) and indirectly, through the improvement of daily functioning (Ching et al., 2002) as well as the reduction of nervousness and tension, improvements in self-care activities, and social support (Hartman et al., 2000). Occupational Therapists that incorporated T'ai Chi stated similar purposes for use as treatment benefits listed in the literature. This suggests that the availability and type of research evidence has influenced the incorporation of this form of CAM.

Acupuncture/Acupressure

Purposes of use of acupuncture/acupressure within responses focused on the relief of symptoms, specifically those associated with pain. This is consistent with previous

research reported by Dean et al. (2000), as well as the World Health Organization as reported by Novey (2000). Dean et al. (2000) also reported the use of acupuncture for spinal cord injury, which was listed among neurological disorders treated by respondents. Other medical conditions and symptoms listed by respondents, such as swelling, sleep deprivation, and neuropathy can be associated with different general medical conditions listed by Dean et al. (2000) and Helms (in Joan & Levin, 1999) who reported on treating conditions such as musculoskeletal pain, carpal tunnel syndrome, myofascial pain, and repetitive strain injuries, rheumatoid arthritis and osteoarthritis (Helms in Jonas & Levin, 1999). Based on literature, it appears that acupuncture and Occupational Therapists share similar treatment goals. Acupuncture aims to prevent illness and facilitate personal growth, thereby improving overall health (Novey, 2000). Such goals are consistent with the paradigms and treatment goals of Occupational Therapy of improving a client's quality of life.

Magnetic Therapy

A relatively low number of Occupational Therapists responding to the questionnaire indicated they had personally used magnetic therapy. However, their purposes for use remain consistent with treatment benefits listed within previous studies. Pawluck (2000) reported that magnetic therapy had many benefits, including anti-inflammatory effects and anti-edema activity (p.166). He also described clinical applications to treat several ailments, illnesses or disorders such as musculoskeletal problems and pain, either general or due to specific medical conditions including arthritis and related problems. Respondents also listed musculoskeletal disorders and

rheumatology as part of their scope of practice, which is consistent with Pawluck (2000) and Harlow et al. (2004). Using magnetic therapy to treat pain due to arthritis was also discussed by Harlow et al. (2004), while Weintraub (2003) discussed the benefits of magnetic therapy for treating pain caused by Diabetic Peripheral Neuropathy. Occupational Therapists that indicated not having used magnetic therapy stated a lack of scientific evidence as primary reason. This suggests a low level of awareness regarding magnetic therapy among respondents, limiting the ability to compare purposes for use with benefits indicated within literature. This is contrary to the previously discussed forms of CAM in which literature appeared to be more commonly available.

Therapeutic Touch (TT)/Reiki

Although more respondents reported usage of TT/reiki than magnetic therapy, there is less empirical evidence with regards to purposes for use. Parallels between purposes for use and treatment benefits reported within the literature were not as apparent in this section as others. Respondents primarily listed the treatment of stress and pain as their purpose of use, which is supported in literature (Fairbrass, 2000; Mailoo, 2002; Olson, Hanson & Michaud, 2003). Due to the current lack of empirical evidence, and low level of usage by respondents, an in-depth discussion of this form of CAM is not justified at this point in time. Prior to such an analysis, further research on its purposes for use and treatment effects would need to be conducted.

Summary on Purposes for Use

It appears that Occupational Therapists utilize CAM for treating symptoms described for each form of CAM in literature. Therefore, it may be inferred that Occupational Therapists who use CAM therapies, also have an appropriate level of understanding of CAM's use. Although one of the objectives of this study was to determine the purposes for use for each form of CAM by respondents, a main focus was to determine potential reasons preventing Occupational Therapists from incorporating CAM. Therefore, justification for purposes for use was not requested in this study. It is not known whether respondents used each form of CAM based on the literature provided or based on personal experience. However, parallels between treatment benefits indicated within literature and respondents' purposes for use suggest that Occupational Therapists tend to be following the literature evidence. With increased availability of literature, the level of incorporation into Occupational Therapy's practice would be affected, as Occupational Therapists' knowledge on CAM use would increase. Conducting further research on CAM's use is thereby justified, as it appears the level of evidence available impacts the incorporation of CAM into Occupational Therapy.

Factors Contributing to CAM Referral & Circumstances Preventing Referral

In order to better understand the opinions of respondents on CAM use and referral within Occupational Therapy, factors which affect its referral must be acknowledged and understood. Since not providing a referral to CAM does not necessarily imply that the respondent feels CAM should not be included within the scope of practice of Occupational Therapy, it was not only important to determine referral rates for both users and non-users of CAM, but also the circumstances under which therapists would consider providing a referral. Therefore, respondents were classified into four groups: "refer only", "use only", "use and refer", and "do not use and do not refer". Narrowing the analysis to only those who have *not used* the indicated form of CAM yet *have referred,* may show that therapists believe the specified form of CAM has value and/or they have experienced positive results - either personally or with a client. However, as respondents were not asked to qualify their response as to the purpose or justification for referral, the discussion of reasons for referrals is beyond the scope of this study.

As respondents were asked to provide information on all forms of CAM within the questionnaire, their opinions on each form of CAM were considered independently from one another. Therefore, each respondent was analyzed *individually* to allow for categorization by respondent, and not per form of CAM. After categorizing all *individual* respondents in terms of use or referral, it was noted that respondents appear more likely to *refer* CAM than personally *use* it. Results showed that a total of 75 *individual* respondents have only *referred* CAM, compared to 18 who indicated having only *used* CAM. One *individual* respondent indicated having used TT/reiki on themselves. In addition, 43 *individual* respondents indicated having *used* and *referred* CAM. The

remaining 62 had neither used nor referred CAM (Appendix XI). Furthermore, the rate of referral was higher among CAM users (48%) versus non-users (19.2%) (Appendix XI). A logical explanation for this would be that therapists who personally use CAM are more likely to support its use within their scope of practice and therefore provide a referral. Regardless of use, therapists also appeared more likely to provide referrals "off the record/on a personal note" than formally, both among users and non-users (Appendix XI). As respondents were not asked to qualify their responses as to the reasons for referrals, assumptions as to why referrals were provided cannot be made.

In order to understand potential barriers preventing CAM's incorporation into Occupational Therapy, it is important to determine circumstances under which a referral *would* be provided. Understanding reasons preventing referrals and gaining empirical evidence may provide the groundwork for future analysis, thereby contributing to the understanding of CAM's use within Occupational Therapy. Circumstances listed by respondents under which they would *consider* providing a referral to CAM focused on client-centered approach and a high standard of care. The majority of respondents considered client benefit and treatment preference or patient request before legal aspects (Appendix VIII). A lack of personal knowledge and/or training was a primary reason stated by respondents indicating "other reasons", or those stating they "would not" provide a referral. Another common response was lack of evidence on the effectiveness of the respective form of CAM. Such responses raise the question of whether or not respondents would change their position if evidence on CAM's effectiveness and training in each form of CAM was provided.

Analysis of individual responses did not show that respondents were completely opposed to the provision of referrals. Closer analysis of elaborations provided by those indicating they have *not* used CAM, and would *not* provide a referral, revealed that only one respondent was categorically against providing a referral. The respondent was referring to TT/reiki, stating that providing a referral would "*cross a line that should not be crossed as it* [involves a] *very subjective client belief system that is none of* [the therapist's] *business*". A large proportion of respondents in the "would not" refer group specified that this decision was based on their belief that clients or their families could access the services on their own. Respondents did not indicate they felt CAM's use/referral was inappropriate or would not benefit the client. Some of the respondents were contradictory in their specification regarding reasons why they "would not" provide a referral. Elaborations included statements such as "*would* encourage the client to pursue [various] CAM methods" and *would* provide a referral "if it was necessary". The ability to self-refer to CAM services in the community may be a contributing factor preventing Occupational Therapists from directly providing referrals.

The fact that Occupational Therapists implied they would consider providing a referral and provide clients with the information necessary to access CAM services is consistent with the paradigm of ensuring a client-centered approach to practice. Elaborations provided further demonstrate that respondents do not appear to be generally opposed to providing referrals to CAM and support the premise that an increase in the knowledge base on CAM's use would impact its level of referral, or provision of information to assist the clients in making informed decisions regarding self-referral.

Overall, it appears that treatment priorities remain focused on the paradigm of using a holistic approach and providing client-centered care. Based on responses and elaborations provided within the open-ended sections, it became apparent that therapists ranked client benefit, client treatment preferences and evidence on CAM's effectiveness above legal considerations in their treatment decisions. Possibly, respondents believe that being knowledgeable on CAM's use and evidence, as well as ensuring their competency in its individual application, implies they are acting within ethical and legal parameters. This would also explain the low ratio of respondents indicating legal aspects as a concern. It appears that Occupational Therapists are not generally opposed to CAM but will require further evidence and literature to justify making referrals or incorporating CAM. This again supports the premise that an increase in the knowledge base and evidence regarding CAM's use would impact its incorporation into the scope of practice of Occupational Therapy.

Factors Restricting CAM Use

Respondents were asked to indicate their current level of CAM use, as well as factors restricting their use and circumstances under which they would consider using CAM. Past research indicated several factors which may restrict the incorporation of a new treatment method into a profession's scope of practice. Factors such as legal consequences resulting from performing a form of treatment without adequate training were discussed by Maurer and Teske (1989) and Taylor and Humphry (1991) with regards to the incorporation of Physical Agent Modalities (PAM) into the field of Occupational Therapy. Richardson (2002) stated that a lack of knowledge on a treatment, due to lack of quality research, would cause apprehension on the practitioner's part (Richardson, 2002). Ethical implications, such as infringing upon another profession, were also listed as a limiting factor when considering the incorporation of a new treatment modality (Maurer & Teske, 1989; Taylor & Humphry, 1991; Glauner et al., 1997). As previously discussed, Kelner et al., (2004) identified potential factors restricting Occupational Therapists from incorporating CAM. These included regulation/jurisdiction, political considerations, and cost. Furthermore, the lack of empirical evidence on CAM had been noted by Eisenberg (2000) as limiting its incorporation into the practice of Occupational Therapy. Prior to discussing the incorporation of CAM into the practice of Occupational Therapy, it is important to understand the factors which practicing Occupational Therapists currently perceive as barriers.

Based on responses provided within this study with regards to factors preventing CAM use, respondents were more concerned with client benefit and making decisions

based on ethical considerations, such as knowledge and training in CAM, than with legal and administrative implications. Previous studies on reasons preventing Occupational Therapists from using CAM modalities as part of their treatment methods indicated it may be due to the lack of quality research and evidence showing CAM's effectiveness (Richardson, 2002; Whitmarsh, 2000). Although lack of evidence was a contributing factor preventing CAM use among respondents, it was not the main factor. Among responding Occupational Therapists who indicated they have *not* used a form of CAM, the primary reason preventing their use was a general lack of knowledge/training on the specified form of CAM and its potential benefits (Appendix IX). Respondents also stated personal reasons, such as lack of interest. This suggests that respondents may be more willing to incorporate CAM into their practice if scientific and/or empirical evidence on its use and benefits was presented.

As discussed earlier and based on previous research conducted on CAM's use, gathering scientific evidence, such as that based on Randomized Control Trials (RCTs), is complex due to methodological limitations resulting from the individuality of CAM therapies. Such limitations include a lack of standardized measurement tools and/or self-report bias (Verhagen, Immink, Van der Maulen & Bierma-Zeinstra, 2004), including the placebo effect. Despite the fact that it has been argued that RCT may not be congruent with client-centered and holistic approaches used in CAM and Occupational Therapy (Park, 2002; Brachtesende, 2005; Stanton, 1997; White, 2004; White, Filshie & Cummings, 2001; Siev-Ner, 2003; Dryden, Baskwil & Preyde, 2004; Taylor-Piliae & Froelicher, 2004), it is important to be aware that RCTs are currently considered the

"gold standard" in providing evidence of a treatment's effectiveness (Mendel, 2004, p.21). Therefore, their role in evidence-based practice (EBP) can not be discounted.

The presence of the "placebo effect" within results does not inherently mean that the treatment itself was ineffective. This is supported by Tonelli & Callahan (2001) who stated "…it can be argued that the reason for the benefit, whether the direct cause or placebo…is irrelevant to the notion of therapeutic value. The fact that an individual patient feels better, regardless of the reason…represents a claim of efficacy" (p.1216). As the goal of Occupational Therapy and CAM is to be client-centered, one may question whether it is relevant if treatment benefits were due to objective/scientific results or subjective reports/placebo effect, if the client experiences an increase in quality of life.

In order for researchers to claim benefit and show valid conclusions, the methodologies used in research and clinical studies must be sound. However, due to the individual nature of CAM therapies, the placebo effect may always play a role. The use of mixed methodologies may lend itself to overcoming the research limitations and obstacles, such as the placebo effect. A more specific suggestion for research design would be the development of individual surveys and questionnaires for specific CAM treatments. This would ensure that data collected specifically addresses the objectives of each study and individual treatment (Kielhofner & Fosyth, 2001). The ability to develop sound research designs may provide the respondents with the knowledge base needed to make informed decisions on CAM's incorporation into the scope of practice of Occupational Therapy.

The Role of Administrative and Legal Restrictions Relating to the Non-Use of CAM

Literature indicated that legal reasons are among primary factors restricting the use of specific forms of treatment such as CAM (Maurer & Teske, 1989; Taylor & Humphry, 1991 & Glauner et al., 1997). However, respondents within this study ranked legal, professional and liability considerations only 5th among seven categorizations. Based on responses provided, it appears that respondents are more concerned with the ethical consideration of holding the proper certification (ranking first among responses provided), and the concern over performing a treatment in which they are not knowledgeable and/or adequately trained (ranking 2nd). Only 8.5% of respondents mentioned legal aspects/employer-related circumstances within open-ended responses, with the majority further stating they were not using the indicated form of CAM as its use was not supported by their employer and/or was against their employer's regulations and policies. Concerns about crossing boundaries of the profession, uncertainty about current regulations and perception of colleagues, were also stated. These concerns are similar to those restricting referral to CAM among respondents, as previously discussed. It appears that therapists believe that by increasing their knowledge on CAM's use, and ensuring their competency in CAM's application, they are acting within legal and ethical parameters. An increase in knowledge may also help decrease concerns regarding crossing professional boundaries, as information on the potential for inter-disciplinary approaches and complementing Occupational Therapy and CAM with one another may be provided, as discussed by Bitton and Giese and summarized by Brachtesende (2005).

Regulations/jurisdiction, political considerations and cost, have also been discussed as factors preventing CAM's incorporation into healthcare (Kelner et al., 2004). Although respondents also listed such factors, administrative and logistical reasons accounted for an average of only 7.4% of responses (n = 64). Within specifications provided for administrative/logistical responses, legal aspects/employer-related and time/resource restrictions ranked fourth (Appendix IX.2). The primary factor indicated by respondents was that they believed CAM's use fell outside the scope of practice of Occupational Therapy. This was followed by a lack of knowledge/training, as well as lack of time/resources. A belief that other professionals were more trained in the specified method ranked closely behind legal aspects/employer related specifications. Once again, it appears that an important factor contributing to Occupational Therapists' apprehension in incorporating CAM stems from a lack of knowledge and/or training. It is not known whether or not an increase in the employee's knowledge and presentation of evidence would affect an employer's policies, or a governing body's policies, or to what extent. However, determining and discussing such factors may be a topic for future research, as it would provide additional information and understanding of factors preventing CAM's incorporation into Occupational Therapy.

Circumstances Influencing the Incorporation of CAM

Respondents stating they "have not used" and "would not" provide a referral, indicated in their elaborations that they may consider suggesting CAM to a client/patient under certain circumstances. These included conditions in which the responding therapist believed that a client would benefit and that a client-centered and holistic approach was followed. Upon analysis of the open-ended section, it became apparent that, in general, the tone of all responses was positive. It appears that most therapists are open to the incorporation of CAM into their treatment programs, be it directly by means of a formal referral, or indirectly through education and encouragement of the client to pursue the matter independently with another professional. Several respondents who were open to the use of any one form of CAM indicated that they would consider its use if *they* believed the client would benefit and/or if *they* believed it would add to the scope of Occupational Therapy. Again, therapists appear primarily concerned with assisting clients in increasing their quality of life. Responding therapists seem to base their treatment decisions on Occupational Therapy's paradigm of holistic health and a client-centered approach to treatment. Such paradigms are shared by Occupational Therapy and CAM, both of which focus on actively engaging the client in their treatment. This supports the potential for CAM's inclusion into the scope of practice of Occupational Therapy, as discussed in the following section.

Potential for Inclusion of CAM into the Scope of Practice of Occupational Therapy

As indicated throughout the results of this study, Occupational Therapists' perception of CAM use seems to impact their willingness to consider the inclusion of CAM therapies into their scope of practice. Based on responses, it appears that Occupational Therapists may be open to incorporating new forms of treatment such as massage/reflexology, acupuncture/acupressure, and T'ai Chi into their treatment protocol. Respondents' comments indicated that they may be more open to these forms than those of magnetic therapy and TT/reiki. Overall, it appears that the form of CAM most often incorporated into a respondent's practice is massage, followed by T'ai Chi, acupuncture/acupressure, TT/reiki and magnetic therapy, respectively. A potential explanation for this order of acceptance is that in treatment forms such as massage/reflexology and T'ai Chi, the therapist is making direct contact with the client/patient and/or actively involving them in the treatment. Therapists may therefore feel they are practicing in a client-centered manner, and thereby have more control and greater influence on the outcome of treatment. Further research would be of benefit in order to determine reasons and potentially clarify why legal aspects did not appear to be a primary concern of Occupational Therapists when considering the provision of, or referral to, CAM. Furthermore, as respondents primarily indicated they would only provide treatment forms which they were trained in and had sufficient knowledge of, the question arises as to when and why therapists would consider legalities involved in using a form of treatment that may not be considered standard protocol. Determining such reasons would provide further knowledge on the complex role of regulations regarding CAM's potential inclusion into the scope of practice of Occupational Therapy.

Reasons for referrals were not requested in this study. However, determining such reasons may reinforce respondents' purposes for use. Determining whether the reasons for referral are related to circumstances under which therapists use, or would consider using CAM, as discussed earlier, may also provide further information on factors currently restricting CAM use. Such information could provide insight regarding the scope of practice and interdisciplinary cooperation between Occupational Therapists and CAM practitioners, allowing governing bodies and employers to develop protocols regarding the use of, and referral to, CAM. Developing protocols, in combination with an increased knowledge base on CAM use, could help reduce barriers on CAM's incorporation into the scope of practice of Occupational Therapy.

Confusion regarding Regulations and Restrictions by Governing Bodies

Previous literature indicated that legal reasons would be a significant factor preventing the use of CAM. However, this was not apparent within this study. The question therefore arises why legal aspects did not rank higher among responses provided. The low ranking of legal reasons as a factor preventing CAM use by respondents can not be interpreted as meaning that Occupational Therapists do not value legal implications or do not perceive legal implications as important. It is possible that respondents were simply not aware of regulations on the use of CAM within the practice of Occupational Therapy, or may be uncertain as to the stance of their governing bodies or employers.

With regards to Alberta's regulations, as of March 2006, AAROT/ACOT did not have an official position statement regarding the incorporation of CAM into the practice of Occupational Therapy. It is unclear whether or not practicing Occupational Therapists were aware of AAROT's position when responding, or whether confusion as per AAROT's position existed, and if so, to what degree responses were affected. However, determining this influence was beyond the scope of this study, as at the time the research was conducted, changes within the Health Professions Act, as well as regulations regarding the practice of Occupational Therapy were underway, yet not completed. Further studies would need to be conducted to determine the impact on respondents' opinions in relation to AAROT's position and the practice guidelines of Occupational Therapy under the revised Health Professions Act.

As the unexpectedly low ranking of legal aspects only became apparent through analysis of responses in this study, formulating assumptions on such reasons would be

premature. Respondents may be attributing the limitations restricting their incorporation of CAM to more concrete reasons, such as their personal lack of training and knowledge, as discussed in previous sections. Additional research is needed to obtain elaborations on the therapists' understanding of legal aspects and employer regulations in order to determine practitioners' reasons for their low ranking of such aspects. Re-defining health care professions under the "Health Professions Act", as previously discussed, would also contribute to decreasing the confusion regarding the roles and limitation of each profession (RSBC 1996, Chapter 183, http://www.qp.gov.bc.ca/statreg/stat/H/96183_01.htm#section2to6, retrieved Mar.18, 2005). Such information may thereby help alleviate confusion regarding regulations and restrictions and potentially decrease barriers currently restricting CAM's use (Richardson, 2002).

In March 2007, AAROT underwent a change in legislation and became the Alberta College of Occupational Therapists (ACOT). With the change in legislation and the Health Professions Act, the use of acupuncture as a treatment modality by Alberta Occupational Therapists was added to the scope of practice. Permits will be provided by the council to Occupational Therapists who can demonstrate knowledge and competence, through completion of training programs recognized/approved by the council (personal communication, registrar of ACOT, Jan. 25, 2007). As the change in regulation is recent, the extent to which practitioners are aware of this change or the impact such a change in regulation would have on therapists' belief regarding the incorporation of CAM into the scope of practice of Occupational Therapy, is not known. Such recent developments show that the practice of Occupational Therapy is undergoing change, which, as

discussed within the introduction, initiated this study. Results of the study confirm the need to examine this change, and the role of CAM within this development, in further detail.

Limitations of Study

The use of a self-report sampling method may have limited the study as response bias may have been introduced. However, the confidential nature of the questionnaire helped control and minimize any negative effects. As well, respondents may not have accurately recalled the percentage of clients treated with the forms of CAM listed, resulting in a lower reported percentage of overall use in terms of total client percentage. Being able to accurately determine the total percentage of clients treated may provide a valuable perspective on the *overall use* and incorporation of CAM within Occupational Therapy, beyond the percentage of individual therapists currently using CAM. However, a comparison of determining differences such as the *percentage* of clients treated with CAM compared to those who are not treated with CAM, was beyond the scope of this study.

An external evaluator was not introduced to confirm interpretations or categorization/coding of responses. Therefore, it is possible that bias was unintentionally introduced while interpreting data, thereby decreasing the level of rigor, despite entries being viewed objectively. Furthermore, a formal reliability index was not calculated. Limitations regarding reliability indices may have been decreased by formally completing a test-retest and/or creating and using alternate or parallel forms with the pre-questionnaire discussion group. It would have then been possible to calculate a correlation coefficient, thereby establishing a reliability index.

The sampling method consisted of professionals registered with AAROT/ACOT and who had consented to having their contact information released. Potential respondents were contacted by either e-mail or mail-out, preventing respondents from

being contacted by more than one method. However, due to the confidential nature of the questionnaire, it is not known whether mail-out respondents completed the questionnaire on-line, as the link was provided in the introduction letter. More e-mails were sent out than mail-out versions, yet the resulting response rates were similar with e-mail being 16% and mail-out 19.9%. This is consistent with suggestions made by researchers, as reported by Klein (2002) who stated that response rates for internet questionnaires were the same as for postal questionnaires. The slightly lower response rate in the e-mail group may be consistent with reasons reported by Douglas (2005), such as the decreased access to computers at work or the possibility that the e-mail may have been deleted. However, two additional e-mail reminders were sent, minimizing this risk. Although all practicing Occupational Therapists on the contact list were contacted, the response rate was lower than anticipated compared to previous questionnaires, which may be due to the topic of research. As indicated previously, the use of CAM within Rehabilitation Medicine has been minimally researched. Therefore, the response rate of those willing or able to express an opinion may have been lower than desired, as the Occupational Therapists may simply not have been aware of the forms listed, decreasing their ability to respond. This may also account for the respondents who did not complete the entire questionnaire or chose not to respond to various sections. Furthermore, the low response rate may be due to the nature of the questionnaire topic and the lack of evidence on the use of CAM within Occupational Therapy in Alberta. Therapists not familiar with CAM, and/or not currently using CAM may have simply read the title of the questionnaire and felt it would not be appropriate for them to respond, disregarding the remainder of the introduction letter and therefore the questionnaire. The use of CAM specifically within the scope of

practice of Occupational Therapy may have also been interpreted as controversial, and professionals may have been hesitant to participate, despite assurances of confidentiality and anonymity. In such cases, it is not known whether these "missing potential respondents" have either used or referred CAM. Therefore, it is not known whether actual CAM use is higher than reported by this study's results, or lower.

However, as the 10 respondents who did not complete the entire questionnaire were classified within the general category "never used and never referred", it may be possible that these missing respondents resulted in an over-estimation of CAM use and referral. The latter can not be confirmed, due to the confidential nature of the questionnaire and the inability to determine reasons for missing responses. Finally, the low response rate limits the ability to generalize results of the study to all practicing therapists within Alberta, despite the fact that there were no statistically significant differences between respondent and AAROT/ACOT demographics.

Conclusion

Implications for Future Research and the Practice of Occupational Therapy

As discussed throughout this thesis, it appears that the health care system is changing. CAM treatments are becoming more common-place in mainstream medicine and rehabilitation, as professionals and patients are choosing different forms of treatment. A change of opinions in healthcare provision as well as client demand, and an interest in inter-disciplinary collaboration, is forging new approaches to treatment methods and the exploration of CAM. To satisfy the demand of therapists for evidence-based treatments, and increased knowledge on CAM's use, which would allow therapists to make evidence-based decisions, further research on the use of CAM is needed.

The results of this study indicate that although some forms of CAM are minimally used, others, such as massage, are becoming more common-place within the field of Rehabilitation Medicine and specifically Occupational Therapy. These are the forms with considerable empirical data to support their usage. Other forms, such as acupuncture, are not as widely used despite empirical evidence within other professions such as Physical Therapy. This could be due to the invasive nature of the form of CAM and the specialized training required. Furthermore, as most responses did not indicate a strong negative bias against the incorporation of CAM (based on elaborations/specifications provided within the open-ended responses), and most elaborations focused on the need for more evidence on the use of each form as well as a general lack of training and/or knowledge, the need for establishment of empirical data/scientific evidence is justified. Developing protocols and clarifying legal aspects may also result in more Occupational Therapists voicing their opinions on the use of CAM.

In summary, therapists appear to be open to change and are searching for evidence to justify applications of new treatment modalities such as these discussed in this thesis. Lack of evidence of each form of CAM and lack of therapist knowledge and/or training seem to be the foremost factors preventing therapists from incorporating CAM into their scope of practice. Consequently, lack of knowledge in, or comfort with CAM's use, combined with the fear of practicing outside their scope is limiting CAM's current use by Occupational Therapists. Therapists are unsure of parameters of use, which is further reinforced by the lack of position statements and protocols of use by governing bodies and employers. Furthermore, since respondents indicated a concern over lack of resources and time, as well as blurring of lines between professions (such as massage and Occupational Therapy), addressing these issues could help decrease barriers to inclusion of CAM into the scope of practice of Occupational Therapy.

In conclusion, it appears that to date, CAM usage by Occupational Therapists is not well established, but has a potential to become incorporated if supported by well conducted research. Providing evidence-based research would further decrease barriers to inclusion as conducting such studies and making results available to Occupational Therapists might alleviate any apprehension regarding the application of CAM as a form of treatment. Establishing such evidence would also aid in potential decision-making processes and logistics involved in the incorporation of CAM into the scope of practice of Occupational Therapy.

References

Alberta Association of Registered Occupational Therapists (AAROT). March 2005, Telephone conversation.

Alberta College of Occupational Therapists (ACOT). March 2007, Telephone conversation.

Aloisio, T. (2004). *Blood never lies: A guide to health and nutrition.* Coral Springs, Fl.: Llumina Press.

Anderson, E.Z.A (2004). Therapeutic Touch. In Davis, C.(Ed.) (2004). *Complementary therapies in rehabilitation* (2nd ed). (pp.321-331). Thorofare, NJ: SLACK Inc.

Astin, J. (1998). Naturopathy. In Raso, J. & Barrett, S. (Ed). (1994). *"Alternative" health care: A comprehensive guide.* Amherst, NY: Promeus Books.

Astin, J. (1998). Why patients use alternative medicine. *Journal of Alternative Medicine in America. 279:1548-1553.*

Bartlett, J.E., Kotrlik, J.W., & Higgins, C.C. (2001). Organizational research: determining appropriate sample size in survey research. *Information Technology, Learning and Performance 19(1):43-50.*

Bascom, A. & Wachs, J.E.(Ed.).(2002). Complementary and alternative therapies in occupational health: Part one. *AAOHN. 50(9):418-424.*

Benor, D.J. (1999). In Jonas, W.B., & Levin, J.S.(Ed.). (1999).*Essentials of complementary and alternative medicine.*(pp.369-382). Baltimore, MD: Lippincott Williams & Wilkins.

Berman, B. M., Lao, L., Langenberg, P., Lin L, W., Gilpin, A., & Hochberg, M. (2004). Effectiveness of acupuncture as adjunctive therapy in osteoarthritis of the knee: A randomized control trial. *Annals of Internal Medicine, 141*(12), 901-910.

Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches* (Chap.7). Thousand Oaks, California: Sage Publications, Inc.

Bitton, L. in Brachtesende, A. (2005). *The American Occupational Therapy Association: OT Practice, June 27,* 9-13.

Bodeker, G., & Kronenberg, F. (2002). A public health agenda for traditional, complementary, and alternative medicine. *American Journal of Pubic Health, 92*(10), 1582-1591.

Bottomley, J.M.(2004) In Davis, C. (Ed.) *Complementary therapies in rehabilitation* (2nd ed). Thorofare, NJ: SLACK Inc.

Bouwman, D., & Notkin, D. Complementary and alternative health care within an occupational therapy practice: One example. *Occupational Therapy Now*, March, 17 2005 . Retrieved March 17, 2005, www.caot.ca.

Boyd, E.A., Pepin, P. & Szabo-Hartin, J. (1999) in Douglas (2005). *Survey of Cognitive assessment use by occupational therapists.* University of Alberta, April 16.

Brachtesende, A. (2005). Using complementary & alternative medicine in occupational therapy. *The American Occupational Therapy Association: OT Practice, June 27.*

Brown, C. A. (2002). Occupational therapist's beliefs regarding treatment options for people with chronic pain. *British Journal of Occupational Therapy. 65*(9): 398-400.

Brown et al. (1995). As cited in Ching, L., Jin-Shin, L.,& Ssu-Yuan, C. (2002). Tai Chi chuan: An ancient wisdom on exercise and health promotion. *Journal of Sports Medicine. 32(4): 211-224.*

Ching, L., Jin-Shin, L.,& Ssu-Yuan, C. (2002). Tai Chi chuan: An ancient wisdom on exercise and health promotion. *Journal of Sports Medicine. 32(4): 211-224.*

Davis, C.(Ed.) (2004). *Complementary therapies in rehabilitation* (2nd ed). Thorofare, NJ: SLACK Inc.

De Bruyn, T. (2002). *A summary of national data on complementary and alternative health care – Current status and future development: A discussion paper*. Health Canada. http://www.hc-sc.gc.ca/dhp-mps/pubs/complement/cahc-acps-summary-synthese/cahc-acps-summary-synthese_1_e.html. Retrieved, Jan.25, 2007

Dean, C., Mullins, M., & Yuen, J.; in Novey, D.W. (2000). *Clinician's complete reference to complementary & alternative medicine.* St. Louis, Missouri: Mosby, Inc.

Diamond, B., Johnson, S., Torsney, K., Morodan, J., Prokop, Brian, J.et al. (2003). Complementary and alternative medicines in the treatment of dementia. *Drugs & Aging. 20(13): 981-999.*

Dillman, D.A., Tortora, R.D., & Bowker, D.K. (1998) in Douglas (2005). *Survey of Cognitive assessment use by occupational therapists.* University of Alberta, April 16.

Douglas, A. (2005). *Survey of Cognitive assessment use by occupational therapists.* University of Alberta, April 16.

Dryden, T., Baskwil, A., & Preyde, M. (2004). Massage therapy for the orthopaedic patient: A review. *Orthopaedic Nursing, 23*(5), 327-332.

Eisenberg (1998) in Bascom, A. (2002). Complementary and alternative therapies in occupational health: Part one. *AAOHN. 50(9):418-424.*

Eisenberg (2000) in Whitmarsh, T. (2000). Evidence-based complementary medicine: State of the evidence/methodological challenges. *The Journal of Alternative and Complementary Medicine, 6*(4), 365-367

Fairbass, J. (2000). In Novey, D.W. (2000). *Clinician's complete reference to complementary & alternative medicine.* (pp.435-443). St. Louis, Missouri: Mosby, Inc.

Farrar, 2001, in Douglas (2005). *Survey of Cognitive assessment use by occupational therapists.* University of Alberta, April 16.

Field, T. (1999). In Jonas, W.B., & Levin, J.S.(Ed.). (1999).*Essentials of complementary and alternative medicine* (pp.369-382). Baltimore, MD: Lippincott Williams & Wilkins.

Glauner, J.H., Ekes, A.M., James, A.E. & Holm, M.B. (1997). A pilot study of the theoretical and technical competence and appropriate education for the use of nine physical agent modalities in occupational therapy practice. *The American Journal of Occupational Therapy. 51(9): 767-774.*

Government of Canada, "Health Professions Act [RSBC 1996] Chapter 183, http://www.qp.gov.bc.ca/statreg/stat/H/96183_01.htm#section2to6, Mar. 18, 05

Greene, E. (2000). In Novey, D.W. (2000). *Clinician's complete reference to complementary & alternative medicine.* (pp.338-348). St. Louis, Missouri: Mosby, Inc

Harlow, T., Greaves, C., White, A., Brown, L., Hart, A. & Ernst, E. (2004). Randomized control trial of magnetic bracelets for relieving pain in osteoarthritis of the hip and knee. *British Medical Journal. 329:1450-1454.*

Hartman, Manos, Winter C, et al. (2000). In Ching, L., Jin-Shin, L.,& Ssu-Yuan, C. (2002). Tai Chi chuan: An ancient wisdom on exercise and health promotion. *Journal of Sports Medicine. 32(4): 211-224.*

Helms, J.M. (1999). In Jonas, W.B., & Levin, J.S.(Ed.). (1999).*Essentials of complementary and alternative medicine.*(pp.369-382). Baltimore, MD: Lippincott Williams & Wilkins.

Holleran, R. (2005). Alternative therapies and emergency care. *Topics in Emergency Medicine. 27(2): 118-123.*

Jacobson BH, Chen HC, Cashel C, et al. (1997). In Ching, L., Jin-Shin, L.,& Ssu-Yuan, C. 2002). Tai Chi chuan: An ancient wisdom on exercise and health promotion. *Journal of Sports Medicine. 32(4): 211-224.*

Jin, P. (1996). In Ching, L., Jin-Shin, L.,& Ssu-Yuan, C. (2002). Tai Chi chuan: An ancient wisdom on exercise and health promotion. *Journal of Sports Medicine. 32(4): 211-224.*

Jonas, W.B., & Levin, J.S.(Ed.). (1999).*Essentials of Complementary and Alternative Medicine.* Baltimore, MD: Lippincott Williams & Wilkins.

Kelner, M.J., Boon, H., Wellman, B. & Welch, S. (2004). Complementary and alternative groups contemplate the need for effectives, safety and cost-effectiveness research. *Complementary Therapies in Medicine. 10(4):25-239.*

Kellner, M., Wellman, B., Boon, H., & Welsh, S. (2004). Responses of established healthcare to the professionalization of complementary and alternative medicine in Ontario. *Social Science & Medicine.59:915-930.*

Kelner, M., Wellman, B. , Boon, H., & Welsh, S. (2004). The role of the state in the social inclusion of complementary and alternative medicine in occupations. *Complementary Therapies in Medicine. 12:79-89.*

Kelley, D. L. (1999). *Measurement made accessible* (pp. Chap.5). Thousand Oaks, California: SAGE Publications, Inc.

Kielhofner, G. & Forsyth, K. (2001). Mesurement properties of a client self-report for treatment planning and documenting therapy outcomes. *Scandinavian Journal of Occupational Therapy, 8*, 131-139.

Klein, J (2002). Using the internet as a vehicle for research. *The American Journal of Occupational Therapy. 56(3): 221-223343.*

Klein, J. (2002). Issues surrounding the use of the internet for data collection. *American Journal of Occupational Therapy 56*(3), 340-343.

Krieger (1975). In Mailoo, V.J. Introduction to Reiki. *British Journal of Therapy and Rehabilitation. 9(5):190-193.*

Law, M. & McColl, M.A. (1989) in Douglas (2005). *Survey of Cognitive assessment use by occupational therapists.* University of Alberta, April 16.

Lawrence, R., Rosch, P. & Plowden, J. (1998). *Magnet therapy: The pain cure alternative.* Rocklin, CA: Prima Communications Inc.

Lewith, G.T., Hyland, M. & Gray, S.F. (2001). Attitudes to and use of complementary medicine among physicians in the United Kingdom. *Complementary Therapies in Medicine. 9:167-172.*

Li, F., Harmer, P., McAuley, E. et al. (2001). An evolution of the effects of Tai Chi exercise on physical functioning among older persons: a randomized control trial. *Annual Behavioural Medicine. 23:139-46.*

Mailoo, V.J. (2002). A brief introduction to Reiki. *British Journal of Therapy and Rehabilitation. May.9(5): 190-193.*

Maurer, K.E. & Teske, R.Y. (1989). Barriers to occupational therapy practice in wellness. *Occupational Therapy: Program Development. The Hawthorne Press, Inc.*

Mendel, J. (2004). Evidence based medicine. benefits, limitations and issues for CAM. *The Australian Journal of Holistic Nursing, 11*(2), 21-29.

Millár,W.J.(1997). Use of alternative health care practitioners by Canadians. *Revue Canadienne de Santé Publique. 88(3): 154-158.*

The National Center for Complementary and Alternative Medicine, 2005; www.nccam.nih.gov, Feb/18/05.

Nottingham, E.N. (2006). Complementary and alternative medicine: Nurse practitioner education and practice. *Holistic Nursing Practice. Sept/Oct:242-246.*

Novey, D.W. (2000). *Clinician's complete reference to complementary & alternative medicine.* St. Louis, Missouri: Mosby, Inc.

Olson, K., Hanson, J. & Michaud, M. (2003). A phase II trial of Reiki for the management of pain in advanced cancer patients. *Journal of Pain Symptom Management. 26(5): 990-997.*

Park, C. M. (2002). Diversity, the individual, and proof of efficacy: Complementary and alternative medicine in medical education. *American Journal of Public Health, 92*(10), 1568-1572.

Park, J. in Statistics Canada. (2005). *Use of alternative health care* No. 16) Retrieved January 25, 2007, from http://www.statcan.ca/Daily/English/050315/d050315b.htm

Pawluk , W. (2000) In Novey, D.W. (2000). *Clinician's complete reference to complementary & alternative medicine.* (pp.164-175). St. Louis, Missouri: Mosby, Inc

Pearson Education NCS (2007). *Survey tool kit.: Sample size and confidence interval calculator*. Retrieved May, 28.2007, from http://survey.pearsonncs.com/sample-calc.htm.

Portney & Watkins (2000) as stated in Douglas (2005). *Survey of Cognitive assessment use by occupational therapists.* University of Alberta, April 16.

Pui, V.M. (2002).*A survey to examine Alberta occupational therapists' perceptions of Internet-based continuing education.* University of Alberta, April 09.

Rabinstein, A. & Shulman, L. M. (2003). In Davis, C.(Ed.) (2004). *Complementary Therapies in Rehabilitation* (2nd ed). Thorofare, NJ: SLACK Inc.

Raso, J. & Barrett, S. (Ed). (1994). *"Alternative" health care: A comprehensive guide.* Amherst, NY: Promeus Books.

Richardson, J. (2002). Evidence-based complementary medicine: Rigor, relevance and the swampy lowlands. *The Journal of Alternative and Complementary Medicine., 8*(3), 221-223.

Ruggie, M. (2004). *Marginal to mainstream: Alternative medicine in America.* New York, NY: Cambridge University Press.

Schaefer, D.R. & Dillman, D.A. (1998). Development of a standard email methodology: results of an experiment. *Public Opinion Quarterly 62*(3), 378.

Sieve-Ner, I., Gamus, D., Lerner-Geva, L. & Achiron, A. (2003). Reflexology treatment relieves symptoms of multiple sclerosis: a randomized controlled study. *Multiple Sclerosis. Aug.9(4):356-362.*

Stanton, S., Law, M., Polatajko, H., Baptiste, S., Tompson-Franson, T., & Kramer, C. et al. (1997). In Townsend E. (Ed.), *Enabling occupation: An occupational therapy perspective*. Ottawa, Ontario: Canadian Association of Occupational Therapists.

Taylor, E. & Humphry, R. (1991). Survey of physical agent modality use. *The American Journal of Occupational Therapy. 45(10):925-931.*

Taylor-Piliae, R.E. & Froelicher, E.S. (2004). The effectiveness of Tai Chi exercise in improving aerobic activity – A meta-analysis. *Journal of Cardiovascular Nursing. 19(1):48-57.*

Tonelli, M. R., & Callahan, T. C. (2001). Why alternative medicine cannot be evidence-based. *Academic Medicine, 76*(12), 1213-1220.

Verhagen, A.P., Immink, M., van der Meulen, A. & Bierma-Zeinstra, S. (2004). The efficacy of Tai Chi Chuan in older adults: A systematic review. *Family Practice. 21(1):101-113.*

Wardell DW. Engebretson J (2001) source unknown.

Wauita, D. (2005). Perspective: Hands on! Using touch in client care. *The American Occupational Therapy Association: OT Practice. June, 27.*

Weintraub, M.I., Wolfe, G.I., Barohn, R.A., Cole, S.P., Parry, G.J., Haya, G. et al. (2003). Static magnetic field therapy for symptomatic diabetic neuropathy: A randomized, double-blind, placebo-controlled trial. *Archives of Physical Medicine and Rehabilitation. 84:736-746.*

Wetzel (1998) in Bascom, A. (2002). Complementary and alternative therapies in occupational health: Part one. *AAOHN. 50(9):418-424.*

Whitmarsh, T. (2000). Evidence-based complementary medicine: State of the evidence/methodological challenges. *The Journal of Alternative and Complementary Medicine, 6*(4), 365-367.

White, P., Filshie, J. & Cummings, T.M. (2001). Clinical trials of Acupuncture: Consensus recommendations for optimal treatments, sham controls and blinding. *Complementary Therapies in Medicine. 9:237-245.*

White, P., Lewith, G., Prescott, P. & Conway, J. (2004). Acupuncture v.s placebo for the treatment of chronic mechanical neck pain. A randomized control trial. *Annual Internal Medicine.141:911-919.*

APPENDICES

Appendix I: Estimated Rate of Return & Sample Size Calculation:

Previous questionnaires conducted on Alberta Occupational Therapists have yielded a range of response rates; including 25% (Douglas), 35.5% (Pui, 2002), 38% (Farrar, 2001), 68% (Law & McColl, 1989) and 86% (Boyd, Pepin & Szabo-Hartin, 1999), as stated by Douglas in 2005. Based on these values, a conservatively anticipated response rate of 30% is expected.

Based on telephone conversations with AAROT (Feb.2005), there are approximately 850 Active Occupational Therapists (excluding students) currently registered, and on the contact list, within Alberta.

Sample Size Calculation:
Based on, and using Cochrane's formula (Bartlett, Kotrlik, & Higgins, 2001, p.48) for Sample Size Calculation with Categorical Data, the following was determined:

Let population size = 850
Then allow the Alpha Level to be 0.05, hence a total acceptable level of error of 5% (2.5% in either direction);
Therefore let t = 1.96
Allow (p)(q) = estimate error of variance
Let p = the anticipated level of return → p= 0.3
Let q be the sample proportion not returning the questionnaire, or (1-p) = 0.7, based on a return rate of 30%
Let n = the minimum number of respondents required for statistical analyses to achieve a pre-set standard error of proportion at 0.025
Let d = the acceptable margin of error, hence d = 0.05

Using Cochrane's Formula: $n = \frac{(t)^2(p)(q)}{(d)^2}$

$n = \frac{(1.96)^2 \times (0.3)(0.7)}{(0.05)^2}$ $\quad$ $n = \frac{(3.8416) \times (0.3)(0.7)}{0.0025}$

$n = \frac{(3.8416) \times (0.21)}{0.0025}$ $\quad$ $n = \frac{0.806736}{0.0025}$

Finally, n = 322.6944

Therefore, a minimum sample size/return rate of **323** is required for statistical analysis to achieve a pre-set standard of error of proportion of 0.025 with 95% confidence interval based on an estimated return rate of 30%

Actual Response Rate:

As of March 2006, based on correspondence with the Alberta Association of Registered Occupational Therapists, there were 1223 active members registered, and on the contact list, within Alberta. In total, 876 e-mails were sent out, 61 were returned to AAROT due to invalid addresses, resulting in 815 potential e-mail respondents. 347 members provided mailing addresses and were sent a paper copy of the questionnaire, one of which was returned due to an incorrect address, resulting in 346 valid mail-out questionnaires sent-out. Therefore, a total of 1161 potential respondents were contacted.

Of the 815 e-mails sent-out, 130 respondents (15.95%) completed the questionnaire. Of the 346 mail-out questionnaires, 64 were returned (18.49%). All questionnaires returned were usable. In the event a mail-out respondent completed a question inappropriately and/or out of order, data adjustments, including appropriate calculations, were made upon input. In total, 199 valid questionnaires were returned, resulting in an overall response rate of 17.14%.

Post Data Collection –Actual Confidence Interval Range

Using Cochrane's Formula: $n = \frac{(t)^2(p)(q)}{(d)^2}$

Based on a Confidence Interval of **90%**, a return rate of 150 would have occurred as:

$n = \frac{(1.64)^2 \times (0.17)(0.83)}{(0.05)^2}$ $\quad n = \frac{(2.68) \times (0.14)}{0.0025}$

$n = \frac{0.3752}{0.0025}$

Finally, n = 150

If n = 199; the following would occur:

Using Cochrane's Formula: $n = \frac{(t)^2(p)(q)}{(d)^2}$

$199 = \frac{(t)^2 \times (0.17)(0.83)}{(0.05)^2}$ $\quad 199(0.0025) = (t)^2 \times (0.1411)$

$\frac{199(0.0025)}{0.1411} = (t)^2$ and $(t)^2 = \frac{0.4975}{0.1411}$ *therefore* $t = \sqrt{3.53}$

Finally, t = 1.88

Therefore, it can be assumed that the actual confidence interval lies between 90-95%. This was confirmed using Pearson Education NCS sample size calculator. Using p = 0.5, a sample size of 199 would result in a confidence interval of 90% with a margin of 5.3% and a 95% confidence interval with a margin of error of 6.3% (http://survey.pearsonncs.com/sample-calc.htm, retrieved May 28, 2007).

Appendix II: Questionnaire (*to follow)*

Appendix II.1: Demographics

Appendix II.2: Copy of Questionnaire

Appendix II.1: Demographics

Demographics

Please indicate your response to the following questions by marking an X in the appropriate location -- *Check **all** that apply.*

1) I am: Female: _____ Male:_____

2) I am (age in years):

20-25	26-30	31-35	36-40	41-45	46-52	52-65

3) I have been practicing Occupational Therapy for:

0-1 Year	2-4Years	5-7Years	8-10Years	>10Years (please specify)

4) Please indicate your client base of practice:

Pediatrics (0-12)	Adolescent (13-17)	Adult (18-65)	Geriatrics (Over 65)

Other (please specify):

5) Please indicate & specify your scope of practice:

Orthotics	Palliative Care	Musculoskeletal Disorders	Hand Therapy	Psychiatry
Neurology	Amputees	Developmental Disabilities	Cardiology	Rheumatology
Educator	Administration	Work Rehab/RTW	Researcher	

Other (please specify): _____

6) Please indicate the setting in which you currently practice:

Hospital	Extended Care	School	W.C.B	Private Practice	Home Care	Psychiatric Facility	University/ Research Centre

Other (please specify): _____

7) Please indicate the geographical area you practice in:

Urban (town)	Rural (country)	Metro (city or city centre)

8) Please indicate the Population Size of the demographical location you practice in:

Less than 10,000	10,000-99,999	100,000-199,999	Over 200,000

9) Please identify the accredited Occupational Therapy program you completed and its location:

_____

Appendix II.2: Questionnaire

Acupuncture (use of needles) and **Acupressure** (use of pressure using hands) points are based on the ancient Qi channels or meridians as described above. The goal of Acupuncture is to restore the energy flow to its proper level by stimulating points along the meridians depending on the symptoms suffered and physical location of the illness/ailment

1) I **have** personally provided Acupuncture and/or Acupressure in my practice as an Occupational Therapist:

YES ☐ **NO** ☐

If **YES** – please answer Questions #2 & #3 If **NO** – please proceed to Question #4

2) Please specify, based on your case load, the approximate percentage of clients **you treat** with Acupuncture and/or Acupressure: **amount treated/total case load:** _____

3) I **have personally provided** Acupuncture and/or Acupressure to treat (*check all that apply*):

Symptoms:

Pain: ____ Spasticity: _____ Stiffness; _____ Fatigue: _____

Stress: _____ Other (please specify): _____

Medical Conditions:

Anxiety:_____

Stress Management:_____

Neurological Disorder (please specify):_____

Musculoskeletal Disorder (please specify):_____

Other Medical Condition (Please specify/Provide detail):_____

Other Symptom (Please specify/Provide detail):_____

*** *Please Continue with Question #6* ***

4) I have **not** personally **provided** Acupuncture and/or Acupressure as an OT because (*check all that apply*):

Not Trained: _____

Against regulations of Governing Body: _____

I am not aware of any illnesses/diagnoses which could benefit: _____

I have no interest in the above method: _____

There is not sufficient evidence on the use of the above method: _____

Administrative and/or Logistical reasons (please specify) _____

Other (please specify): _____

5) Under what circumstances **would you** personally provide Acupuncture and/or Acupressure (*please check **all** that apply*) ?

If I held the proper certifications_____

Supported by governing body _____.

Accepted and supported by employer _____

Covered under professional liability insurance _____

Colleagues were openly using _____

Included in scope of practice as defined by the "Health Professions Act"_____

Sufficient Evidence existed _____

Based on personal professional judgement the client may benefit _____

I would not (please specify) _____

Other (please specify) _____

Continued on next page – turn over **Turn Over**

****Whether or not** you have personally provided Acupuncture and/or Acupressure as an OT
Have you

6) Prescribed or referred a patient to Acupuncture and/or Acupressure:
YES ☐ **NO** ☐

If you answered **YES**, please answer Question #7, if **NO** – proceed to Question #8

7) I have suggested and/or referred a client to Acupuncture and/or Acupressure:
Formally (Charted) ☐ On a personal note (off the record) ☐

******Please proceed with Question #9******

8) As you have **not** referred a patient to Acupuncture and/or Acupressure –
Under what circumstances *would you* prescribe and/or refer a patient to Acupuncture and/or Acupressure (*please check **all** that apply*) ?

Patient specifically requested a referral _____
Supported by governing body _____
Accepted and supported by employer _____
Colleagues were openly providing referrals _____
Covered under professional liability insurance _____
Patient would be covered by their health plan _____
Based on personal professional judgement the client may benefit _____
I would not refer a patient (please specify)_____
_____
Other (please specify) _____
_____

Regardless of your current or past provision of, and/or referral to, Acupuncture/Acupressure

9) Do you believe that Acupuncture and/or Acupressure should be included within the scope of practice of Occupational Therapy? Why or Why not? ***Please explain your answer:***

_____
_____
_____
_____
_____
_____
_____

Thank you, **please continue** with the next form of CAM on the **Following page**

Magnetic Therapy:

The theory behind magnetic therapy is that magnets emit a magnetic field called a "magnetic flux". This "magnetic flux" taps into and interacts with the body's natural magnetic field, thereby affecting both the nervous and physiological systems. Magnetic therapy is described as "Tapping Into" the body's meridians, or energy flow. Magnets are strategically placed to activate the meridians and affect several body systems depending on their placement.

1) I **have** used/provided Magnetic Therapy in my practice as an Occupational Therapist:

YES ☐ **NO** ☐

If **YES** – please answer Questions #2 & #3 If **NO** – please proceed to Question #4

2) Please specify, based on your case load, the approximate percentage of clients **you treat** with Magnetic Therapy: **amount treated/total case load : _____**

3) I **have used/provided** Magnetic Therapy to treat (*check all that apply*):

Symptoms:

Pain: ____ Spasticity: _____ Stiffness: _____ Fatigue:_____

Stress: _____ Other (please specify): _____

Medical Conditions:

Anxiety:_____

Stress Management:_____

Neurological Disorder (please specify):_____

Musculoskeletal Disorder (please specify):_____

Other Medical Condition (Please specify/Provide detail):_____

Other Symptom (Please specify/Provide detail):_____

*** *Please Continue with Question #6* ***

4) I have **not** used/provided Magnetic Therapy as an OT because (*check all that apply)*:

Not Trained: _____

Against regulations of Governing Body: _____

I am not aware of any illnesses/diagnoses which could benefit: _____

I have no interest in the above method: _____

There is not sufficient evidence on the use of the above method: _____

Administrative and/or Logistical reasons (please specify) _____

Other (please specify): _____

_____

5) Under what circumstances **would you** use Magnetic Therapy in your practice (*please check **all** that apply)*?

If I held the proper certifications_____

Supported by governing body _____

Accepted and supported by employer _____

Covered under professional liability insurance _____

Colleagues were openly using _____

Included in scope of practice as defined by the "Health Professions Act"_____

Sufficient Evidence existed _____

Based on personal professional judgement the client may benefit _____

I would not (please specify) _____

_____

Other (please specify) _____

_____

Continued on back – turn over **Turn Over**

****Whether or not** you have used/provided Magnetic Therapy as an OT
Have you

6) Prescribed or referred a patient to Magnetic Therapy:
YES ☐ **NO** ☐

If you answered **YES**, please answer Question #7, if **NO** – proceed to Question #8

7) I have suggested and/or referred a client to Magnetic Therapy:
Formally (Charted) ☐ On a personal note (off the record) ☐

******Please proceed with Question #9******

8) As you have **not** referred a patient to Magnetic Therapy –
Under what circumstances *would you* prescribe and/or refer a patient to Magnetic Therapy (*please check **all** that apply*) ?

Patient specifically requested a referral _____
Supported by governing body _____
Accepted and supported by employer _____
Colleagues were openly providing referrals _____
Covered under professional liability insurance _____
Patient would be covered by their health plan _____
Based on personal professional judgement the client may benefit _____
I would not refer a patient (please specify) _____
_____
Other (please specify) _____
_____

Regardless of your current or past use of, and/or referral to, Magnetic Therapy

9) Do you believe that Magnetic Therapy should be included within the scope of practice of Occupational Therapy? Why or Why not? ***Please explain your answer:***

_____
_____
_____
_____
_____
_____
_____

Thank you, **please continue** with the next form of CAM on the **Following page**

Massage originates from the Greek word meaning "to knead", and has been defined by Filed in Jonas and Leving (1999) as "the hand manipulation of body tissues to promote wellness and to reduce stress and pain." (p.383).

Reflexology: "a therapeutic method that uses manual pressure applied to specific areas, or zones, of the foot that correspond to areas of the body, in order to relieve stress and prevent and treat physical disorder"(Jonas & Leving, 1999, p.583).

1) I **have** personally provided Massage and/or Reflexology in my practice as an Occupational Therapist:
YES ☐ **NO** ☐
If **YES** – please answer Questions #2 & #3 If **NO** – please proceed to Question #4

2) Please specify, based on your case load, the approximate percentage of clients you treat with Massage and/or Reflexology: **amount treated/total case load :** _____

3) I **have personally provided** Massage and/or Reflexology to treat (*check all that apply*):

Symptoms:
Pain: ____ Spasticity: _____ Stiffness: _____ Fatigue: _____
Stress: _____ Other (please specify): _____

Medical Conditions:
Anxiety:_____
Stress Management:_____
Neurological Disorder (please specify):_____
Musculoskeletal Disorder (please specify):_____
Other Medical Condition (Please specify/Provide detail):_____
Other Symptom (Please specify/Provide detail):_____

***Please Continue with Question #6 ***

4) I have **not** personally provided Massage and/or Reflexology as an OT because (*check all that apply*):
Not Trained: _____
Against regulations of Governing Body: _____
I am not aware of any illnesses/diagnoses which could benefit: _____
I have no interest in the above method: _____
There is not sufficient evidence on the use of the above method: _____
Administrative/Logistical reasons (please specify) _____
Other (please specify): _____
_____

5) Under what circumstances **would you** personally provide Massage and/or Reflexology (*please check **all** that apply)* ?
If I held the proper certifications_____
Supported by governing body _____
Accepted and supported by employer _____
Covered under professional liability insurance _____
Colleagues were openly using _____
Included in scope of practice as defined by the "Health Professions Act"_____
Sufficient Evidence existed _____
Based on personal professional judgement the client may benefit _____
I would not (please specify) _____
_____
Other (please specify) _____
_____

Continued on back – turn over **Turn Over**

****Whether or not** you have personally provided Massage and/or Reflexology as an OT
Have you

6) Prescribed or referred a patient to Massage and/or Reflexology:
YES ☐ **NO** ☐

If you answered **YES**, please answer Question #7, if **NO** – proceed to Question #8

7) I have suggested and/or referred a client to Massage and/or Reflexology:
Formally (Charted) ☐ On a personal note (off the record) ☐

******Please proceed with Question #9******

8) As you have **not** referred a patient to Massage and/or Reflexology –
Under what circumstances *would you* prescribe and/or refer a patient to Massage and/or Reflexology (*please check **all** that apply*) ?

Patient specifically requested a referral _____
Supported by governing body _____
Accepted and supported by employer _____
Colleagues were openly providing referrals _____
Covered under professional liability insurance _____
Patient would be covered by their health plan _____
Based on personal professional judgement the client may benefit _____
I would not refer a patient (please specify) _____
_____
Other (please specify) _____
_____

Regardless of your current or past provision of, and/or referral to, Massage and/or Reflexology

9) Do you believe that Massage and/or Reflexology should be included within the scope of practice of Occupational Therapy? Why or-Why not? ***Please explain your answer:***

_____
_____
_____
_____
_____
_____
_____

Thank you, **please continue** with the next form of CAM on the **Following page**

Therapeutic Touch (TT): A form of spiritual healing which involves a laying of the hands by the therapist a few inches away from the patient's body. The therapist "centers" themselves to the patient, and focuses on the patient's energy field. The therapist uses their hands to sense an imbalance in energy and then visualizes the energy becoming balanced and free flowing.
Reiki: Similar to Therapeutic Touch, yet the hands are placed directly on the client to promote healing on all levels: physical, mental, emotional and spiritual (Fairbrass, 2000). Defined by Fairbrass (in Novey, 2000), as "Rei = universal & Ki = vital force or energy flowing through all that is alive" (p.436).

1) I **have** personally provided Therapeutic Touch (TT) and/or Reiki in my practice as an Occupational Therapist:

YES ☐ **NO** ☐

If **YES** – please answer Questions #2 & #3 If **NO** – please proceed to Question #4

2) Please specify, based on your case load, the approximate percentage of clients you treat with TT and/or Reiki: **amount treated/total case load :** _____

3) I **have personally provided** TT and/or Reiki to treat (*check all that apply*):

Symptoms:

Pain: ____. Spasticity: _____ Stiffness: _____ Fatigue:_____

Stress: _____ Other (please specify): _____

Medical Conditions:

Anxiety:_____

Stress Management:_____

Neurological Disorder (please specify):_____

Musculoskeletal Disorder (please specify):_____

Other Medical Condition (Please specify/Provide detail):_____

Other Symptom (Please specify/Provide detail):_____

*** *Please continue with Question #6* ***

4) I have **not** personally provided TT and/or Reiki as an OT because (*check all that apply*):

Not Trained: _____

Against regulations of Governing Body: _____

I am not aware of any illnesses/diagnoses which could benefit: _____

I have no interest in the above method: _____

There is not sufficient evidence on the use of the above method: _____

Administrative/Logistical reasons (please specify) _____

Other (please specify): _____

_____

5) Under what circumstances **would you** personally provide TT and/or Reiki (*please check **all** that apply)* ?

If I held the proper certifications_____

Supported by governing body _____.

Accepted and supported by employer _____

Covered under professional liability insurance _____

Colleagues were openly using _____

Included in scope of practice as defined by the "Health Professions Act"_____

Sufficient Evidence existed _____

Based on personal professional judgement the client may benefit _____

I would not (please specify) _____

_____

Other (please specify) _____

_____

Continued on back – turn over **Turn Over**

****Whether or not** you have personally provided TT and/or Reiki as an OT
Have you

6) Prescribed or referred a patient to TT and/or Reiki:
YES ☐ **NO** ☐

If you answered **YES**, please answer Question #7, if **NO** – proceed to Question #8

7) I have suggested and/or referred a client to TT and/or Reiki:
Formally (Charted) ☐ On a personal note (off the record) ☐

******Please proceed with Question #9******

8) As you have **not** referred a patient to TT and/or Reiki –
Under what circumstances *would you* prescribe and/or refer a patient to TT and/or Reiki (*please check **all** that apply*) ?

Patient specifically requested a referral _____
Supported by governing body _____
Accepted and supported by employer _____
Colleagues were openly providing referrals _____
Covered under professional liability insurance _____
Patient would be covered by their health plan _____
Based on personal professional judgement the client may benefit _____
I would not refer a patient (please specify) _____
_____
Other (please specify) _____
_____

Regardless of your current or past provision of, or referral to, Therapeutic Touch and/or Reiki

9) Do you believe that TT and/or Reiki should be included within the scope of practice of Occupational Therapy? Why or Why not? ***Please explain your answer:***

_____
_____
_____
_____
_____
_____
_____

Thank you, **please continue** with the next form of CAM on the **Following page**

T'ai Chi:

A specific form of exercise composed of slow, exact and controlled movements performed in a precise order and composed of over 108 postures and transitions. Its main focus is the incorporation of the body as a whole, recognizing the importance of the spirit in health, the mind-body connections, and the production of energy to achieve overall health. Both the musculoskeletal and nervous systems are activated and exercised (Davis, 2004).

1) I **have** personally provided T'ai Chi as part of my treatment protocol in my practice as an Occupational Therapist:

YES ☐ **NO** ☐

If **YES** – please answer Questions #2 & #3 If **NO** – please proceed to Question #4

2) Please specify, based on your case load, the approximate percentage of clients **you** treat with T'ai Chi:
amount treated/total case load : _____

3) I **have personally provided** T'ai Chi to treat (*check all that apply*):

Symptoms:

Pain: ____. Spasticity: _____ Stiffness: _____ . Fatigue: _____
Stress: _____ Other (please specify): _____

Medical Conditions:

Anxiety:
Stress Management:_____
Neurological Disorder (please specify):_____
Musculoskeletal Disorder (please specify):_____
Other Medical Condition (Please specify/Provide detail):_____
Other Symptom (Please specify/Provide detail):_____

*** *Please continue with Question #6* ***

4) I have **not** personally provided T'ai Chi as an OT because (*check all that apply*):

Not Trained: _____
Against regulations of Governing Body: _____
I am not aware of any illnesses/diagnoses which could benefit: _____
I have no interest in the above method: _____
There is not sufficient evidence on the use of the above method: _____
Administrative/Logistical reasons (please specify) _____
Other (please specify): _____
_____

5) Under what circumstances **would you** personally provide T'ai Chi (*please check **all** that apply)* ?

If I held the proper certifications_____
Supported by governing body _____
Accepted and supported by employer _____
Covered under professional liability insurance _____
Colleagues were openly using _____
Included in scope of practice as defined by the "Health Professions Act"_____
Sufficient Evidence existed _____
Based on personal professional judgement the client may benefit _____
I would not (please specify) _____
_____
Other (please specify) _____
_____

Continued on back – turn over **Turn Over**

****Whether or not** you have personally provided T'ai Chi as an OT
Have you

6) Prescribed or referred a patient to a T'ai Chi practitioner and/or group:
YES ☐ **NO** ☐

If you answered **YES**, please answer Question #7, if **NO** – proceed to Question #8

7) I have suggested and/or referred a client to T'ai Chi:
Formally (Charted) ☐ On a personal note (off the record) ☐

******Please proceed with Question #9******

8) As you have **not** referred a patient to a T'ai Chi practitioner and/or group –
Under what circumstances *would you* prescribe and/or refer a patient to a T'ai Chi practitioner and/or group (*please check **all** that apply*) ?

Patient specifically requested a referral _____
Supported by governing body _____
Accepted and supported by employer _____
Colleagues were openly providing referrals _____
Covered under professional liability insurance _____
Patient would be covered by their health plan _____
Based on personal professional judgement the client may benefit _____
I would not refer a patient (please specify) _____
_____
Other (please specify) _____
_____

Regardless of your current or past provision of T'ai Chi, and/or referral, to T'ai Chi

9) Do you believe that T'ai Chi should be included within the scope of practice of Occupational Therapy?
Why or Why not? ***Please explain your answer***

_____
_____
_____
_____
_____
_____
_____

10) Any Comments? : _____
_____
_____
_____
_____
_____
_____

Thank you for your time and comments.
That completes the questionnaire, your participation is greatly appreciated !!

Appendix III.1 – Instructions for Completion of Questionnaire
****Mail-Out Version****

Thank you for participating in this study.
Please complete all 6 sections of the questionnaire.
The first section gathers demographic information. The remaining 5 sections gather information about your use and opinions of 5 forms of Complementary and Alternative Medicine (CAM).
For each form of CAM in this questionnaire, please use the **definition provided** at the **top** of each section to base your responses on.

The questions for each form of CAM are the same, yet each form is addressed individually. **Please note** that each page is **double sided.**

For each question, please check **all answers that apply** and provide your **opinions** and comments **when requested.** Please only use the space provided.
Based on your response to some questions, you will be directed to skip certain questions – ***please read directions carefully.***

Completion of the questionnaire will take approximately 20-30min of your time.

Thank you for your participation in this study,

Sincerely,

Heidi Knupp

Appendix III.2: – Instructions for Completion of Questionnaire; E-mail Version

Directions for Completion of On-Line Questionnaire

Thank you for participating in this study.
Please complete all 6 sections of the questionnaire.
The first section gathers demographic information. The remaining 5 sections gather information about your use and opinions of 5 forms of Complementary and Alternative Medicine (CAM).
For each form of CAM in this questionnaire, please use the **definition provided** at the **top** of each section to base your responses on.

The questions for each form of CAM are the same, yet each form is addressed individually. **Please note** that each page is **double sided.**

For each question, please check **all answers that apply** and provide your **opinions** and comments **when requested.** Please only use the space provided.
Based on your response to some questions, you will be directed to skip certain questions – ***please read directions carefully.***

Completion of the questionnaire will take approximately 20-30min of your time.

Thank you for your participation in this study,

Sincerely,

Heidi Knupp, MScOT Candidate

Appendix IV: Introduction Letter; Mail-out Version

Complementary and Alternative Medicine in Occupational Therapy
A Survey of Its Use by Alberta Occupational Therapists

Investigators: Heidi Knupp, Graduate Student/Thesis Candidate, Faculty of Rehabilitation Medicine, University of Alberta

Dr. John Misiaszek (supervisor), Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta, 2-64 Corbett Hall, Edmonton, T6G 2G4, Phone 492-6042

Dr. Sharon Warren (co-supervisor), Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta, 2-64 Corbett Hall, Edmonton, T6G 2G4, Phone 492-7856

Background Information on the Study:

The health care system is facing a new challenge of balancing supply and demand of treatment methods. In striving to improve overall health and well-being, and treating illnesses – both physical and mental - patients are looking for alternate treatment methods beyond pharmaceuticals or surgery, commonly used in mainstream medicine. More natural, holistic approaches to healthcare are being chosen to a greater extent. In recent years, an increasing number of people have made use of *Complementary and Alternative Medicine* (CAM) , choosing methods such as Acupuncture and Massage.

In general, CAM is defined as treatment styles that are not widely taught in medical schools, and which focus more on the spiritual and holistic healing of an individual than on simply curing disease or illness (Raso, 1994 & Ruggie, 2004). According to the National Centre for Complementary and Alternative Medicine (NCCAM), CAM is a diverse group of medical and health care systems, practices and products that are not currently considered part of conventional medicine (Aug/10/05, www.nccam.nih.gov).

It is traditionally thought that an imbalance in the energy fields/meridians (Chakras/Qi) within the body and environment, which are addressed by CAM, results in illness. By tapping into the charkas, CAM aims to restore the balance and thereby treat illness and/or disease.

The foundation of Occupational Therapy practice and principles, through its paradigms, frames of references and theories, is to be client-centered by using holistic treatments and approaches. Literature on CAM suggests that it shares these same ideals. Practitioners approach treatment with the goal of being client centered and "holistic", incorporating a person's *physical*, *spiritual*, *affective*, and *environmental components*.

Importance & Purpose of Study:

Opinions on the use of CAM within the field of Rehabilitation Medicine vary greatly, and to date, the use of CAM by Occupational Therapists has been minimally researched. No survey conducted in Canada or Alberta was found, leaving several questions unanswered.

Before further research into the effectiveness of CAM in Occupational Therapy practice can be conducted it is necessary to identify which forms of CAM, if any, are currently being used by Occupational Therapists, as well as establishing the opinions and positions of Occupational Therapists within Alberta on the use of CAM within the practice of Occupational Therapy.

Procedure:

To determine the use of CAM by practicing Occupational Therapists in Alberta we are requesting that you complete the questionnaire included. The forms of CAM included in this questionnaire are limited to those most likely to be used in practice. Each form of CAM contained in the questionnaire is briefly described. Responses need to be based on these definitions to ensure consistency and minimize ambiguity. Responses will be selected from a list provided, except when opinions and/or comments are requested. Completion of the survey [questionnaire] will take approximately 20-30min of your time.

You do not have to take part in this survey [questionnaire] if you do not wish to.

Confidentiality:

All information provided will remain confidential. The demographic information provided is of general nature and will not allow the researcher to identify you. No identifying information of any sort will be attached to data collected in any published or presented information. Information provided will be kept for five years in a locked cabinet at the University of Alberta, following completion of the study. Digital data will be stored on a password protected medium.

Anonymity: If you wish to remain *completely* anonymous, return it in the envelope provided without identifying your return address.

Options for Completion of Survey [Questionnaire]:
You may return the survey [questionnaire] using one of the following ways:
a) return it in the envelope provided.
b) fax it to the number below.
c) complete it on the web-site by following the link provided.

Consent:
By completing and returning the questionnaire you imply that you consent to participate in this study. As such, you infer:

1) you understand that you have been asked to be in a research study.
2) you have read the information provided in this correspondence.
3) you understand the benefits and risks involved in taking part in this study.
4) you have the opportunity to ask questions or discuss this study by contacting the researchers using the contact information provided.
5) you understand that you are free to refuse to participate, or to refuse to answer any questions you so choose.
6) you understand that your involvement and responses will remain confidential.

7) you understand who will have access to your records.

PLEASE RETAIN A COPY OF THIS LETTER FOR YOUR RECORDS

If you have any other questions about the study you can contact Heidi Knupp at the phone number or e-mail address provided.

If you have any concerns about any aspect of this study, please contact Dr. Paul Hagler, Associate Dean of Research, Faculty of Rehabilitation Medicine, at (780)492-9674.

Heidi Knupp
Department of Occupational Therapy
2-64 Corbett Hall
University of Alberta
Edmonton, AB
T6G 2E1

E-mail: hknupp@ualberta.ca
Phone: (780)492-6042 Fax: (780)492-4628 (OT dept. fax)

Please ensure all responses are post-dated NO LATER than MAY 8th, 2006 to ensure that the completed surveys [questionnaires] reach the researcher in time for data analysis to be completed.

Thank you very much in advance for your participation as well as your attention to the deadline for participation, your opinions and comments are invaluable to this study.

Sincerely,

Heidi Knupp, MScOT Candidate

DIRECT LINK TO SURVEY [Questionnaire] --

http://www.surveymonkey.com/s.asp?u=891781835523

Web-Site with printable version of survey [questionnaire] (and link to questionnaire) –

http://www.ualberta.ca/~hknupp/camsurvey.htm

Appendix V: Schedule of Initial and Follow-Up E-mails

Initial E-mail: March 23, 2006

Follow-Up E-mail #1: April 06, 2006

Final Reminder E-mail: April 25, 2006

On-Line Survey [questionnaire] Closure: May 08, 2006

Data Collection Completed/Final Mail-Out Survey [questionnaire] Returned: May 15th, 2006.

*** The survey [questionnaire] information letter including a direct link to the survey [questionnaire], as well as a web-site with a printable version of the survey [questionnaire] was attached to each e-mail.

Appendix V.1: E-mail Letter; Request for Participation
Sent: March 23, 2006

Subject Line: Express your opinion about alternative medicine

Dear colleague:

Complementary and Alternative Medicine (CAM) therapies are becoming more popular with the general population as alternatives to treatments using drugs and surgery. CAM therapies are also becoming more widely used by other health care professionals. Currently, there is no information available as to how widely CAM therapies are used in our profession. I am currently conducting research on the use of CAM by Alberta Occupational Therapists. This research is part of MScOT thesis. Attached to this e-mail you will find an information letter that further explains the study. To better understand the extent to which CAM therapies are utilized by Occupational Therapists in Alberta I would greatly appreciate if you would consider taking the time read the information provided and completing the questionnaire. This will only take 20-30 minutes of your time, but will help our profession by guiding future research into the CAM therapies most likely to be used in Occupational Therapy. In turn, this will help all us by ensuring that as Occupational Therapists we are knowledgeable about the best treatment options available to our clients.

YOUR ANSWERS AND OPINIONS ARE IMPORTANT EVEN IF YOU HAVE NEVER CONSIDERED USING OR PRESCRIBING CAM THERAPIES.

Thank you for considering to participate in this study. If you have any questions or are unable to open any of the attached files or access the questionnaire please contact me at the return e-mail address. You may also request to receive all information relating to this study via surface mail if you prefer.

Sincerely,

Heidi Knupp (BScOT)

Appendix V.2: E-mail Request for Participation – Reminder E-mail
Sent: Wednesday April 5, 2006

Subject Line: Express your Opinion about alternative medicine -- Reminder E-mail

Dear colleague:

Two weeks ago an e-mail was sent out requesting your participation in a survey allowing you to express your opinions about Complementary and Alternative Medicine. If you have already responded, THANK YOU very much for your input. If not, please consider participating at this time as any opinions on the use of Complementary and Alternative Medicine would be greatly appreciated. Following is some information on the study as well as instructions allowing you to participate.

Complementary and Alternative Medicine (CAM) therapies are becoming more popular with the general population as alternatives to treatments using drugs and surgery. CAM therapies are also becoming more widely used by other health care professionals. Currently, there is no information available as to how widely CAM therapies are used in our profession. I am currently conducting research on the use of CAM by Alberta Occupational Therapists. This research is part of MScOT thesis. Attached to this e-mail you will find an information letter that further explains the study. To better understand the extent to which CAM therapies are utilized by Occupational Therapists in Alberta I would greatly appreciate if you would consider taking the time read the information provided and completing the questionnaire. This will only take 20-30 minutes of your time, but will help our profession by guiding future research into the CAM therapies most likely to be used in Occupational Therapy. In turn, this will help all us by ensuring that as Occupational Therapists we are knowledgeable about the best treatment options available to our clients.

YOUR ANSWERS AND OPINIONS ARE IMPORTANT EVEN IF YOU HAVE NEVER CONSIDERED USING OR PRESCRIBING CAM THERAPIES.

Thank you for considering to participate in this study. If you have any questions or are unable to open any of the attached files or access the questionnaire please contact me at the return e-mail address. You may also request to receive all information relating to this study via surface mail if you prefer.

Sincerely,

Heidi Knupp (BScOT)

Appendix V.3: E-mail Request for Participation – Final Reminder
Sent: April 24, 2006

Subject Line: Final Call -- Express your opinion about alternative medicine

Dear colleague:

Four weeks ago an e-mail was sent out requesting your participation in a survey allowing you to express your opinions about Complementary and Alternative Medicine. If you have already responded, thank you very much for your input. If not, any opinions on the use of Complementary and Alternative Medicine would be greatly appreciated. Following is some information on the study as well as instructions allowing you to participate.

Complementary and Alternative Medicine (CAM) therapies are becoming more popular with the general population as alternatives to treatments using drugs and surgery. CAM therapies are also becoming more widely used by other health care professionals. Currently, there is no information available as to how widely CAM therapies are used in our profession. I am currently conducting research on the use of CAM by Alberta Occupational Therapists. This research is part of MScOT thesis. Attached to this e-mail you will find an information letter that further explains the study. To better understand the extent to which CAM therapies are utilized by Occupational Therapists in Alberta I would greatly appreciate if you would consider taking the time read the information provided and completing the questionnaire. This will only take 20-30 minutes of your time, but will help our profession by guiding future research into the CAM therapies most likely to be used in Occupational Therapy. In turn, this will help all us by ensuring that as Occupational Therapists we are knowledgeable about the best treatment options available to our clients.

YOUR ANSWERS AND OPINIONS ARE IMPORTANT EVEN IF YOU HAVE NEVER CONSIDERED USING OR PRESCRIBING CAM THERAPIES.

Thank you for considering to participate in this study. If you have any questions or are unable to open any of the attached files or access the questionnaire please contact me at the return e-mail address. You may also request to receive all information relating to this study via surface mail if you prefer.
Please be advised that the survey will be closing on May 5th 2006.

Sincerely,

Heidi Knupp (BScOT)

Appendix VI: Copy of Questionnaire Web-Site
(to follow)

UNIVERSITY OF ALBERTA
EDMONTON, ALBERTA, CANADA

Faculty of Rehabilitation Medicine
Department of Occupational Therapy

2-64 Corbett Hall
Edmonton, Alberta, Canada T6G 2G4
Tel: 780.492.2499 Fax: 780.492.4628

Complementary and Alternative Medicine in Occupational Therapy
A Survey of Its Use by Alberta Occupational Therapists

Investigators: Heidi Knupp, Graduate Student/Thesis Candidate, Faculty of Rehabilitation Medicine, University of Alberta

Dr. John Misiaszek (supervisor), Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta, 2-64 Corbett Hall, Edmonton, T6G 2G4, Phone 492-6042

Background Information on the Study:

The health care system is facing a new challenge of balancing supply and demand of treatment methods. In striving to improve overall health and well-being, and treating illnesses – both physical and mental - patients are looking for alternate treatment methods beyond pharmaceuticals or surgery, commonly used in mainstream medicine. More natural, holistic approaches to healthcare are being chosen to a greater extent. In recent years, an increasing number of people have made use of *Complementary and Alternative Medicine* (CAM) , choosing methods such as Acupuncture and Massage.

In general, CAM is defined as treatment styles that are not widely taught in medical schools, and which focus more on the spiritual and holistic healing of an individual than on simply curing disease or illness (Raso, 1994 & Ruggie, 2004). According to the National Centre for Complementary and Alternative Medicine (NCCAM), CAM is a diverse group of medical and health care systems, practices and products that are not currently considered part of conventional medicine (Aug/10/05, www.nccam.nih.gov).

It is traditionally thought that an imbalance in the energy fields/meridians (Chakras/Qi) within the body and environment, which are addressed by CAM, results in illness. By tapping into the charkas, CAM aims to restore the balance and thereby treat illness and/or disease.

The foundation of Occupational Therapy practice and principles, through its paradigms, frames of references and theories, is to be client-centered by using holistic treatments and approaches. Literature on CAM suggests that it shares these same ideals. Practitioners approach treatment with the goal of being client centered and "holistic", incorporating a person's *physical*, *spiritual*, *affective*, and *environmental components*.

Importance & Purpose of Study:

Opinions on the use of CAM within the field of Rehabilitation Medicine vary greatly, and to date, the use of CAM by Occupational Therapists has been minimally researched. No survey conducted in Canada or Alberta was found, leaving several questions unanswered.

Before further research into the effectiveness of CAM in Occupational Therapy practice can be conducted it is necessary to identify which forms of CAM, if any, are currently being used by Occupational Therapists, as well as establishing the opinions and positions of Occupational Therapists within Alberta on the use of CAM within the practice of Occupational Therapy.

Procedure:

To determine the use of CAM by practicing Occupational Therapists in Alberta we are requesting that you complete the questionnaire found on the web-site, which can be reached by following the link provided. The forms of CAM included in this questionnaire are limited to those most likely to be used in practice. Each form of CAM contained in the questionnaire is briefly described. Responses need to be based on these definitions to ensure consistency and minimize ambiguity. Responses will be selected from a drop-down menu bar, except when opinions and/or comments are requested. Completion of the survey will take approximately 20-30min of your time.

You do not have to take part in this survey if you do not wish to.

Confidentiality:

All information provided will remain confidential. The demographic information provided is of general nature and will not allow the researcher to identify you. As the survey is completed on-line, please be advised that only IP addresses will be kept for security purposes. Only the primary researchers will have access to the IP addresses and any other identifying information. No identifying information of any sort will be attached to data collected in any published or presented information. Information provided will be kept for five years in a locked cabinet at the University of Alberta, following completion of the study. Digital data will be stored on a password protected medium.

Anonymity: If you wish to remain *completely* anonymous, please follow the link provided, print off the questionnaire and return it in an envelope without identifying your return address.

Options for Completion of Survey:

You may return the survey using one of the following ways:

a) complete it on the web-site by following the link provided.

b) download it from the web-site, and fax or mail it to the address below

Consent:

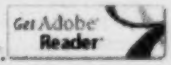
By completing and returning the questionnaire you imply that you consent to participate in this study. As such, you infer:

1) you understand that you have been asked to be in a research study.
2) you have read the information provided in this correspondence.
3) you understand the benefits and risks involved in taking part in this study.
4) you have the opportunity to ask questions or discuss this study by contacting the researchers using the contact information provided.
5) you understand that you are free to refuse to participate, or to refuse to answer any questions you so choose.
6) you understand that your involvement and responses will remain confidential.
7) you understand who will have access to your records.

PLEASE PRINT AND RETAIN A COPY OF THIS LETTER FOR YOUR RECORDS

Click here to take survey

Click here to PRINT the survey

(you will need Adobe Reader to print the survey. 

-- click on the symbol to download).

If you wish to receive a paper version of the questionnaire by mail, please contact Heidi Knupp at the phone number or e-mail provided and a copy will be sent to you. If you have any other questions about the study you can contact Heidi Knupp at the phone number or e-mail address provided.

If you have any concerns about any aspect of this study, please contact Dr. Paul Hagler, Associate Dean of Research, Faculty of Rehabilitation Medicine, at (780) 492-9674.

Heidi Knupp
Department of Occupational Therapy
2-64 Corbett Hall
University of Alberta
Edmonton, AB
T6G 2E1

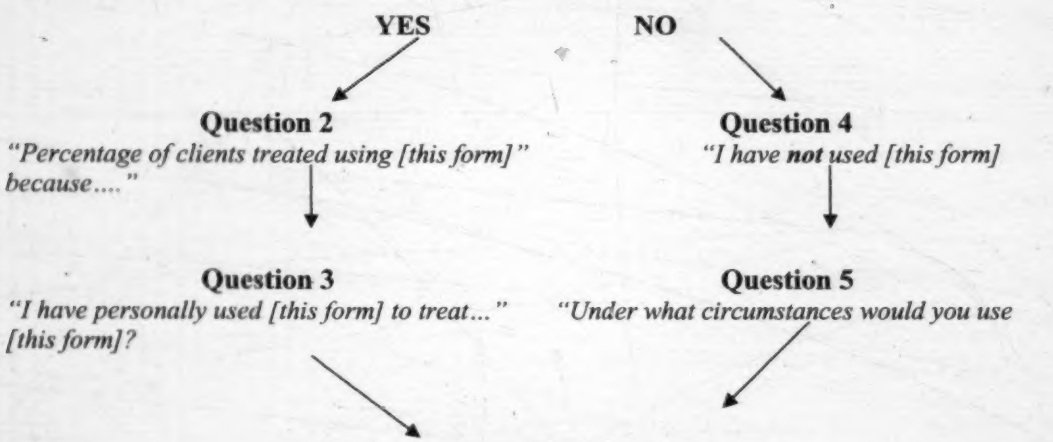
E-mail: hknupp@ualberta.ca
Phone: (780)492-6042 Fax: (780)492-4628 (OT dept. fax)

Thank you very much in advance for your time and participation, your opinions and comments are invaluable to this study.

Sincerely,
Heidi Knupp, MScOT Candidate

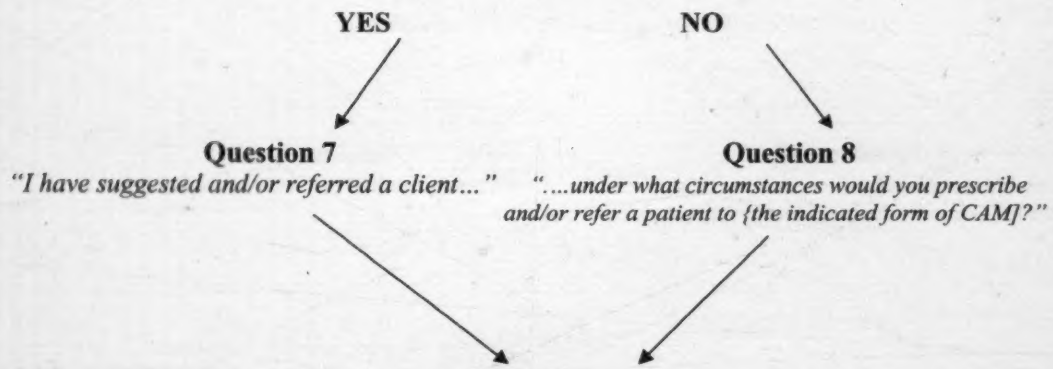
Appendix VII: Flow of Questions/Skip Logic

Question 1: *" I have personally used and/ or provided [the indicated form of CAM] in my practice as an Occupational Therapist"*


YES
NO
Question 2
"Percentage of clients treated using [this form]" because...."
Question 4
"I have not used [this form]
Question 3
"I have personally used [this form] to treat..." [this form]?
Question 5
"Under what circumstances would you use

Whether or not you have personally use/provided [the indicated form of CAM] -- Have you:

Question 6
"Prescribed or referred a patient to [the indicated from of CAM]?


YES
NO
Question 7
"I have suggested and/or referred a client..."
Question 8
"....under what circumstances would you prescribe and/or refer a patient to {the indicated form of CAM]?"

Question 9
"Do you believe that [the indicated form of CAM] should be included within the scope of practice of Occupational Therapy? Why or Why not? Please explain your answer"

Appendix VIII: Table 35 - Question 8

Table 35: Question 8 -- *Under what circumstances would a referral be provided?* –
-- Specification of Open-Ended Responses

	Response Option					
Form of CAM Used	Response *"Lack of Knowledge and/or Training"*	Response *"Lack of Knowledge and/or Training"*	Response *"Lack of Knowledge and/or Training"*	Response *"Not enough Evidence"*	Response *"Not enough Evidence"*	Response *"Not enough Evidence'*
	"would not" % (n)	"other" % (n)	*Total* % (n)	"would not" % (n)	"other" % (n)	*Total* % (n)
Acupuncture/ Acupressure (n = 192)	10.8 (21)	3.1 (6)	*13.8 (27)*	2.6 (5)	4.6 (9)	*7.2 (14)*
Magnetic Therapy (n = 186)	16.1 (30)	5.9 (11)	*22 (41)*	14.5 (27)	7 (13)	*21.5 (40)*
Massage/Reflexology (n = 146)	1.4 (2)	0.0 (0)	*1.4 (2)*	0.0 (0)	1.4 (2)	*1.4 (2)*
Therapeutic Touch/ Reiki (n = 181)	12.7 (13)	1.1 (2)	*14.4 (25)*	8.8 (16)	3.9 (7)	*12.7 (23)*
T'ai Chi (n = 172)	3.5 (6)	1.2 (2)	*4.7 (8)*	0.0 (0)	1.2 (2)	*1.2 (2)*
Total (n = 880 responses)	9.4 (83)	2.4 (21)	*11.8 (104)*	5.5 (48)	3.8 (33)	*9.2 (82)*
Average %	8.9%	2.3%	*11.3%*	5.2%	3.6%	*8.8%*

Appendix IX

Table 36: Question 4 -- *I have not personally used {the indicated form of CAM} in my practice as an Occupational Therapist because (check all that apply):*

	Response Option							
Form of CAM Used	**Not Trained**	**Again Regulations of Governing Body**	**Not aware of any illnesses/ Dx which would benefit**	**I have no interest in the method**	**There is not sufficient Evidence on it's use**	**Choose Not to Answer/ No Response**	**Administrative/Logistical**	**Other**
	Total % (n)	Total % (n)	Total % (n)	Total % (n)	Total % (n)	Total % (n)	Total % (n)	Total % (n)
Acupuncture/ Acupressure (n = 192)	94.8 (182)	12 (23)	10.4 (20)	11.5 (22)	7.8 (15)	1.6 (3)	9.9 (19)	12.5 (24)
Magnetic Therapy (n = 188)	69.7 (131)	12.2 (23)	34 (64)	39.9 (75)	46.8 (88)	2.1 (4)	5.9 (11)	13.3 (25)
Massage/Reflexology (n = 141)	92.2 (130)	14.9 (21)	5.7 (8)	12.2 (17)	7.1 (10)	2.1 (3)	8.5 (12)	19.9 (28)
Therapeutic Touch/ Reiki (n = 178)	71.3 (127)	14.6 (26)	20.8 (37)	36 (64)	36.5 (65)	5.6 (10)	5.6 (10)	12.4 (22)
T'ai Chi (n = 166)	86.1 (143)	7.8 (13)	10.8 (18)	12.7 (21)	9 (15)	6 (10)	7.2 (12)	11.4 (19)
Total % (n = 865)	82.4 (713)	12.3 (106)	17 (147)	23 (199)	22.3 (193)	3.5 (30)	7.4 (64)	13.6 (118)

Appendix IX.2 - Elaborations on Restrictions of Use

Table 37: Specifications Provided "*Administrative/Logistical & Other*":

	Acupuncture/ Acupressure (n = 192)	Magnetic Therapy (n = 188)	Massage/ Reflexology (n = 141)	Therapeutic Touch/Reiki (n = 178)	T'ai Chi (n = 166)	**Total**	***Average***
Elaboration Provided	Total % (n)	Total % (n)	Total % (n)	Total % (n)	Total % (n)	Total (n)	%
Felt would benefit client	1 (1+1=2)	0.0 (0)	1.4 (0+2=2)	0.56 (0+1=1)	0.0 (0)	5	*0.59*
Would add to scope of Occupational Therapy	0.0 (0)	0.0 (0)	0.0 (0)	0.56 (1+0=1)	0.0 (0)	1	*0.11*
Evidence/research	0.0 (0)	2.1 (1+3=4)	1.4 (0+2=2)	1.1 (0+2=2)	1.2 (0+2=2)	10	*1.2*
Lack of knowledge/training	3.6 (0+7=7)	7.4 (1+13=14)	0.71 (0+1=1)	3.9 (1+6=7)	1.8 (0+3=3)	32	*3.5*
Legal aspects/employer related	2.1 (4+0=4)	1.1 (2+0=2)	2.8 (3+1=4)	2.8 (4+1=5)	1.2 (2+0=2)	17	*2*
Other professionals are more trained	1 (1+1=2)	0.0 (0)	5.7 (3+5=8)	0.0 (0)	3 (2+3=5)	15	*1.9*
Outside scope of practice/does not fit in practice setting	11.5 (10+12=22)	5.3 (4+6=10)	10.6 (2+13=15)	5.1 (1+8=9)	6.6 (3+8=11)	67	*7.8*
Personal bias	1 (0+2=2)	1.1 (0+2=2)	0.71 (0+1=1)	1.1 (0+2=2)	0.0 (0)	7	*0.78*
Lack of time and/or resources	2.6 (5+0=5)	1.6 (2+1=3)	4.3 (3+3=6)	2.2 (2+2=4)	3.6 (4+2=6)	24	*2.9*

Total = admin. + other

Note: as respondents could indicated >1 option the total percentage is above 100%

Appendix X

Table 38: Circumstances under which those who have not used Complementary and Alternative Medicine would consider doing so

	Response Option										
	If I held the proper certifications	Supported by Governing Body	Accepted and Supported by Employer	Covered Under Professional Liability Insurance	Colleagues were Openly Using	Included in Scope of Practice Under "Health Professions Act"	Sufficient Evidence Existed	Based on Personal Professional Judgement, client may benefit	Choose not to Answer	I would Not/Other	Other
CAM Form	Total %(n)	Total %(n)	Total %(n)	Total %(n)	Total %(n)	Total %(n)	Total %(n)	Total %(n)	Total %(n)	Total %(n)	Total %(n)
Acupuncture/ Acupressure (n = 193)	82.9 (160)	56.0 (108)	61.7 (119)	61.1 (118)	17.6 (34)	60.6 (117)	48.7 (94)	55.4 (107)	2.1 (4)	15.0 (29)	3.6 (7)
Magnetic Therapy (n = 185)	50.3 (93)	37.3 (69)	36.8 (68)	36.8 (68)	12.4 (23)	36.8 (68)	58.9 (109)	34.6 (64)	3.2 (6)	31.4 (58)	7.6 (14)
Massage/ Reflexology (n = 144)	72.9 (105)	50.0 (72)	51.0 (74)	48.6 (70)	16.7 (24)	48.6 (70)	40.3 (58)	53.5 (77)	2.8 (4)	25.0 (36)	5.6 (8)
Therapeutic Touch/Reiki (n = 179)	48.6 (87)	33.5 (60)	33.0 (59)	34.1 (61)	10.1 (18)	31.8 (57)	36.3 (65)	36.9 (66)	5.6 (10)	40.2 (72)	3.9 (7)
T'ai Chi (n = 173)	62.4 (108)	32.9 (57)	35.5 (61)	34.1 (59)	12.7 (22)	32.9 (57)	31.8 (55)	53.8 (93)	5.8 (10)	22.0 (38)	5.2 (9)
Total (n = 874)	63.3 (553)	41.9 (366)	43.5 (380)	43 (376)	13.8 (121)	42.2 (369)	43.6 (381)	46.6 (407)	3.9 (34)	26.7 (233)	5.1 (45)
Average %	63.4	41.9	43.6	42.9	13.9	42.1	43.2	46.8	3.9	26.7	5.2

Appendix XI: Incidence of CAM Referral Among Respondents

Appendix XI.1:

Table 39.1: Referral Rate of all respondents

Response Option	Acupuncture/ Acupressure	Magnetic Therapy	Massage/ Therapeutic Touch	TT and/or Reiki	T'ai Chi	Total	*% Total*
Respondents to question	196	192	190	189	189	956	*100*
YES (n =)	53	3	84	13	58	211	*22.1*
NO (n =)	141	186	101	172	127	727	*76.0*
Choose not to answer/ Not applicable (n =)	2	3	5	4	4	18	*1.9*
"YES" Referral % *per form of CAM*	27.0 (53/196)	1.6 (3/192)	44.2 (84/190)	6.9 (13/189)	15.9 (30/189)		
"NO" Referral % per form of CAM	71.9 (141/196)	96.9 (186/192)	53.2 (101/190)	91.0 (172/189)	67.2 (127/189)		
Average Referral %	***" YES" = 19.1***	***"NO" = 76***					

Table 39.2: Referral Rate among users of CAM:

Response Option	Acupuncture/ Acupressure	Magnetic Therapy	Massage/ Therapeutic Touch	TT and/or Reiki	T'ai Chi	Total	*Average %*
Respondents to question (n =)	5	2	45	6	16	74	*100*
YES % (n =)	80.0 (4)	0.0 (0)	57.8 (26)	33.3 (2)	68.8 (11)	58.1 (43)	*48*
NO % (n =)	20.0 (1)	100.0 (2)	40.0 (18)	66.7 (4)	25.0 (4)	39.2 (29)	*50.3*
Choose not to answer/ Not applicable % (n =)	0.0 (0)	0.0 (0)	2.2 (1)	0.0 (0)	6.3 (1)	2.7 (2)	*1.7*

Table 39.3: Referral Rate among Non-Users of CAM:

Response Option	Acupuncture/ Acupressure (n = 194)	Magnetic Therapy (n = 189)	Massage/ Therapeutic Touch (n = 145)	TT and/or Reiki (n = 181)	T'ai Chi (n = 172)	Total (n = 616)	*% Total (n=875)*
YES % (n)	25.3 (49)	1.6 (3)	40 (58)	6.1 (11)	27.3 (47)	168	19.2
NO % (n)	72.2 (140)	96.8 (183)	56.6 (82)	92.3 (167)	70.9 (122)	694	79.3
Choose not to answer/ Not applicable % (n)	1.0 (2)	1.1 (2)	2.1 (3)	1.6 (3)	1.7 (3)	13	1.5
Respondents to question (n =)	*191*	*188*	*143*	*181*	*172*	**875**	*100*

*n= "no" respondents from Question 1

Table 39.4: Final Categorization (199 respondents)

Categorization of Individual Respondents	n =	% Total
Use ONLY	18	9.0
Special Category i: indicated "Use ONLY" on *self* (TT/Reiki)	1	0.5
Refer ONLY	75	37.7
Use & Refer two *separate* forms	6	3.0
Use & Refer the *same* form	37	18.6
NO Use & NO Referral -- *all* forms	52	26.1
Special Category ii: Early drop-out/ No to Use & Referral –*all forms*	10	5.0
Total	**199**	**100.0**

Appendix XII: Coding of Open-Ended/Opinion-Based Responses

Coded Response Option	Description
91	Felt would benefit the client
92	Would add to the scope of practice of Occupational Therapy
93	[due to…] Evidence and/or Research
94	As an adjunct with additional training
95	Lack of knowledge and/or training
96	Legal aspects and/or Employer related
962	No time and/or Lack of resources
97	Other professionals are more trained
98	Out of scope of practice of OT and/or Does not fit into current practice setting
99	Personal bias
910	Unsure
911	Indifferent
912	No response provided
913	Yes
914	No
915	Other
999	Difference in Opinion on Grouped Forms
9131	Yes – Acupuncture
9132	Yes – Acupressure
9133	Yes – Massage
9134	Yes – Reflexology
9135	Yes – Therapeutic Touch
9136	Yes – Reiki
9141	No – Acupuncture
9142	No – Acupressure
9143	No – Massage
9144	No – Reflexology
9145	No – Therapeutic Touch
9146	No – Reiki